FT-736R
TECHNICAL SUPPLEMENT

cust # 194039   423275

YAESU MUSEN CO., LTD.
TOKYO, JAPAN

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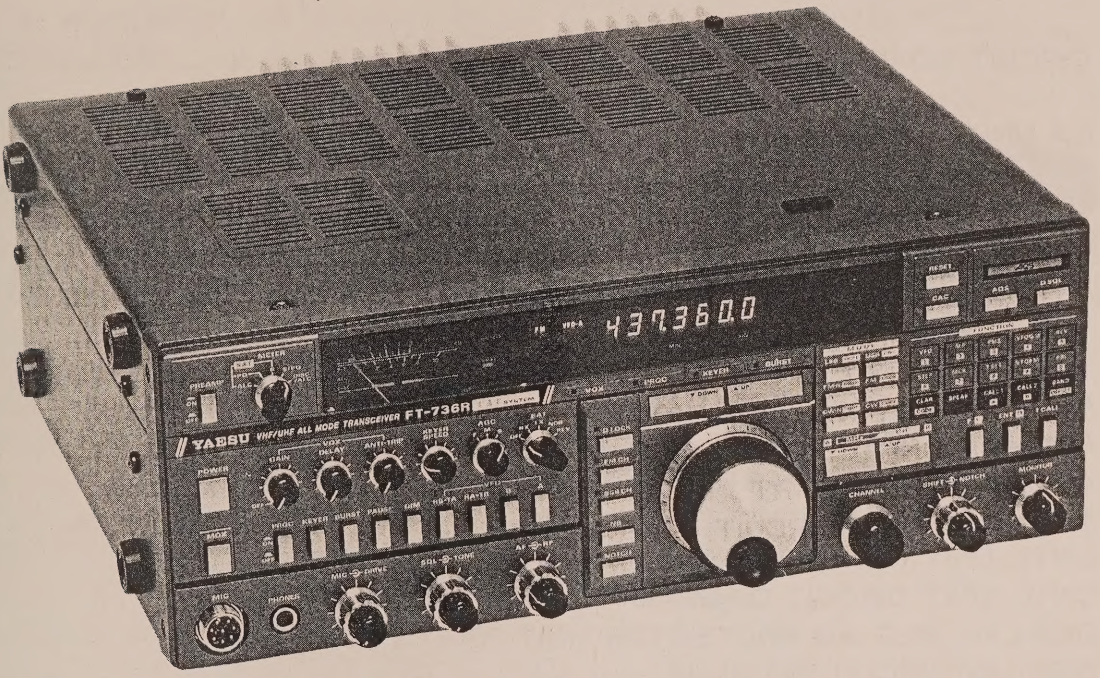
FT-736R TECHNICAL SUPPLEMENT



This manual is intended to serve as a supplement to the FT-736R Operating Manual. Detailed information regarding functions, installation, interconnections and operation has been provided in the Operating Manual, and is not reprinted herein. Therefore, this supplement is not intended to serve as an independent reference, but to be used in conjunction with the information provided in the Operating Manual.

Because there are nearly five hundred semiconductor devices in the FT-736R, circuit description information is provided in the form of numerous block diagrams. We hope that this manner of providing functional information proves to be more convenient for the owner and technician than would a lengthy verbal description. Those readers unfamiliar with the basic types of analog and digital circuits that serve as the building blocks of the FT-736R are encouraged to study instructional material, such as that provided in handbooks on amateur radio and digital circuit design, before attempting to understand the design of the FT-736R. Each block in the block diagrams represents one such basic circuit, while the Component Applications List provides additional details for each semiconductor. General information on integrated circuits and their applications is available in the data provided by the IC manufacturers. Specific circuit details are provided in the schematic diagrams in this manual.

While we believe the technical information in this manual is correct, Yaesu assumes no liability for damage that may occur as a result of typographical or other errors that may be present. Your cooperation in pointing out any inconsistencies in the technical information would be appreciated.

Yaesu Musen reserves the right to make changes in the circuitry of this transceiver, in the interest of technological improvement, without obligation to notify owners or to modify any sets produced prior to the modification.

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CIRCUIT BOARD ACCESS

TOP COVER

The following units (pcb's) are accessed by removing the top cover:

- TX Unit
- 144 MHz Main Unit
- 144 & 430 MHz PA Units
- 430 MHz PLL Unit
- 430 MHz RF Unit
- 430 MHz Front End Unit
- AF Unit
- Protector Unit
- ½ of RX Unit

To remove the top cover, remove the eight screws (4 each marked " ★ " or " ※ ") in Figure 1). Then lift the cover off slowly so as not to stress the loudspeaker wires. Unplug these wires from J3016 on the RX Unit before pulling the cover away.

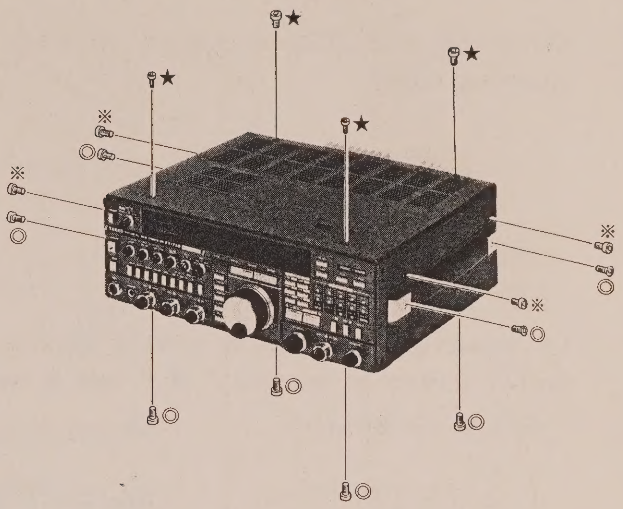


Figure 1

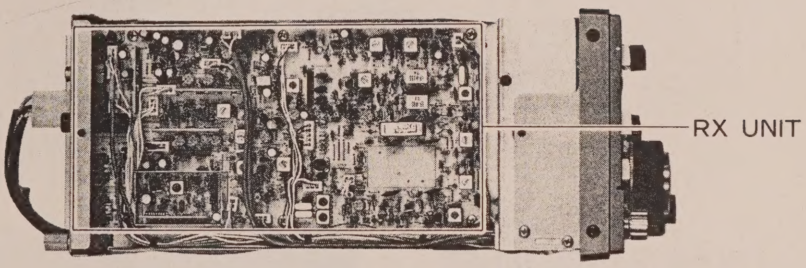


Figure 2

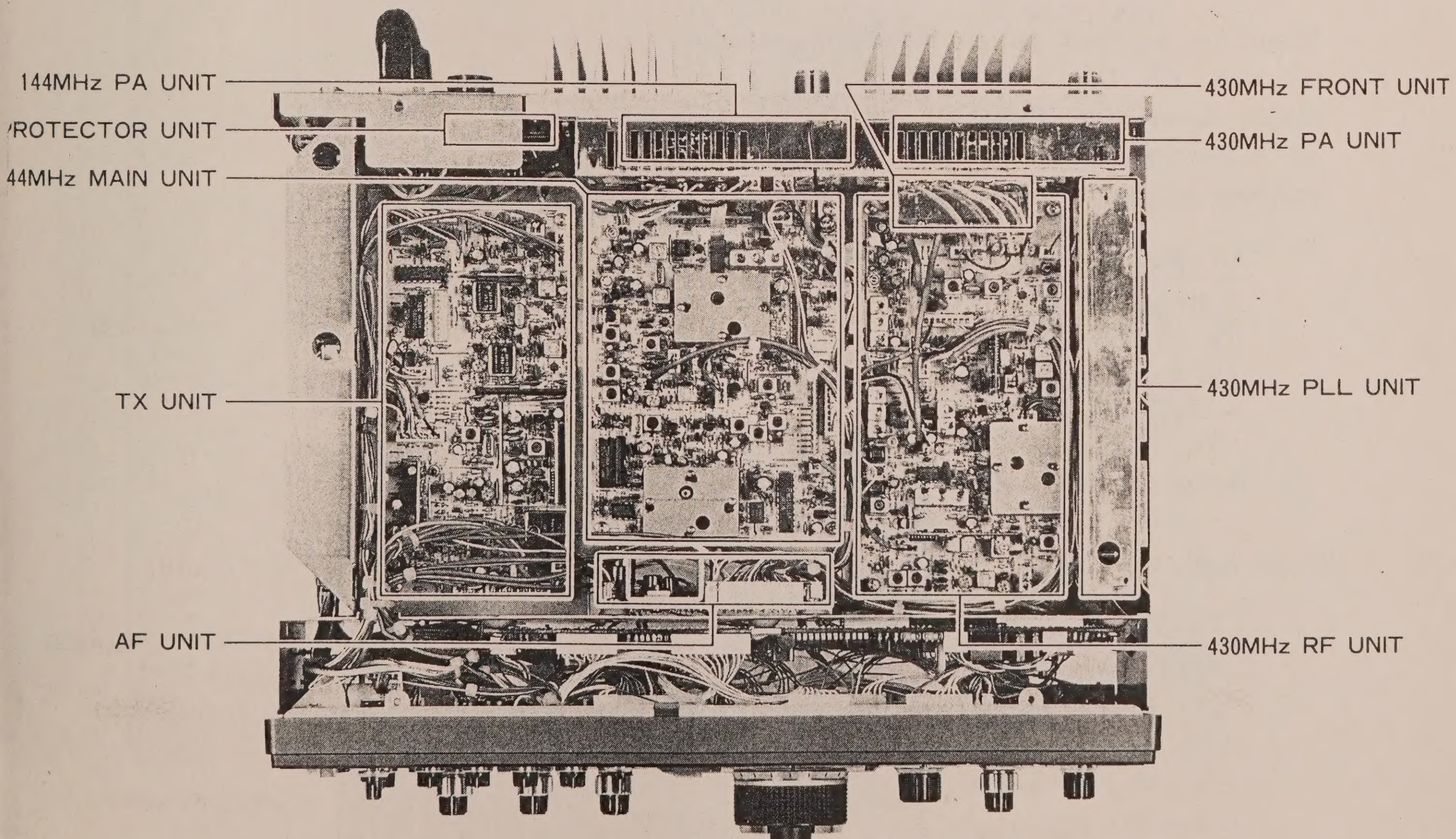


Figure 3

CIRCUIT BOARD ACCESS

BOTTOM COVER

Removing the bottom cover exposes the following units:

- Power Supply Unit
- Reg Unit
- Optional Band Modules
- ½ of RX Unit

To remove the bottom cover, remove the twelve screws (4 marked " ※ " and 8 marked " ◎ ") in Figure 1).

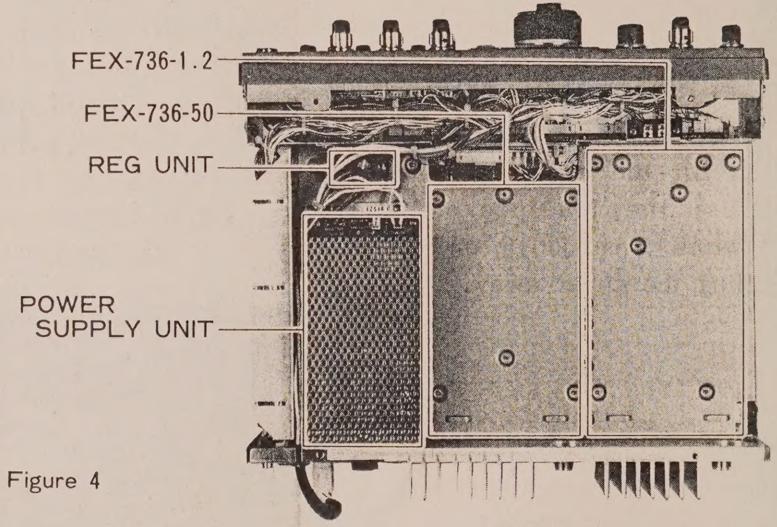


Figure 4

FRONT PANEL HINGE

When the top and bottom covers have been removed, the front can be slid forward and folded down after loosening the two screws on either side, shown in Figure 5. This provides access to the following boards:

- Control Unit
- Display Unit
- VR-A, -B, -C and -D Units
- SW-A, -B and -C Unit
- Encoder Unit

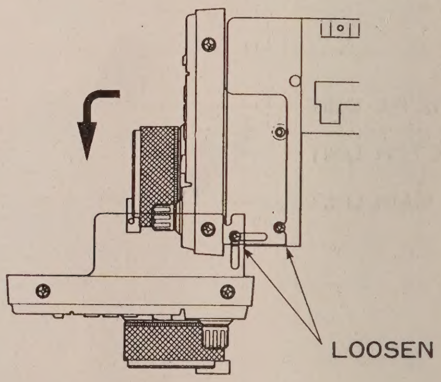


Figure 5

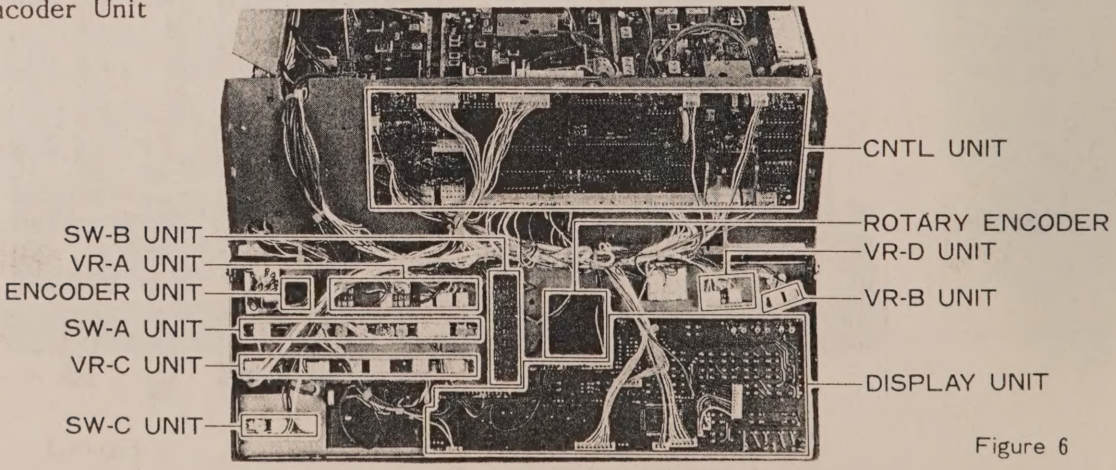
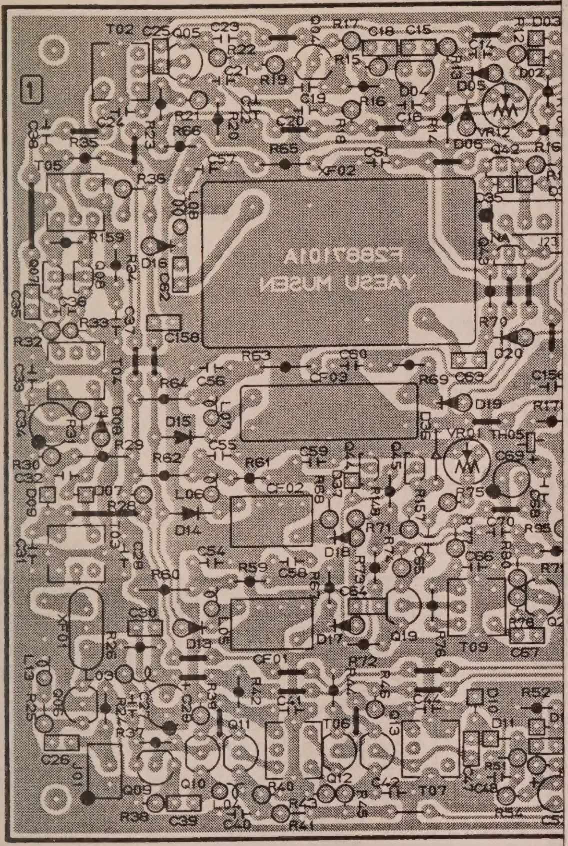
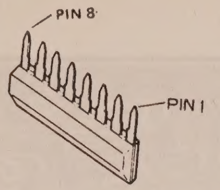


Figure 6

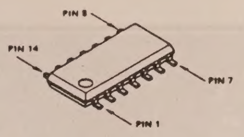
IT PARTS LAYOUT

RX UNIT (No. 3XXX)

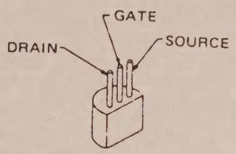




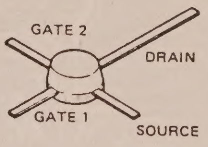
µPC577H(Q3021)



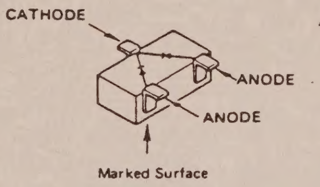
LA6324M(Q9301,9401)



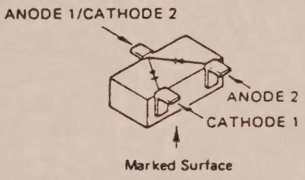
2SK125(Q3006)



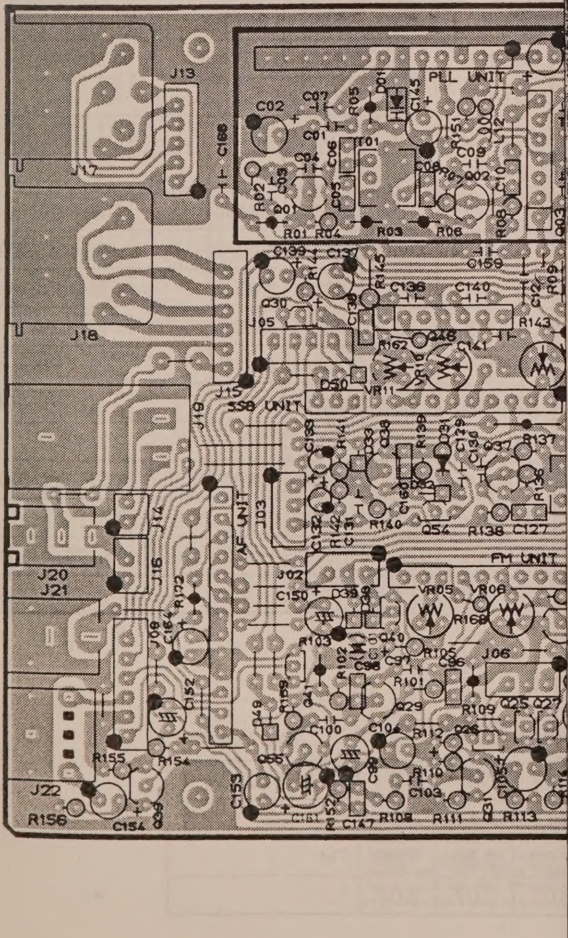
3SK74L(Q3032,3036)

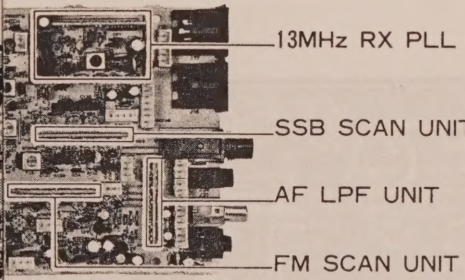


1SS184(B3) (Q9301,9401)



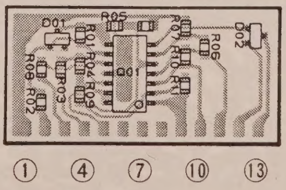
1SS226(C3) (Q9302)





X)

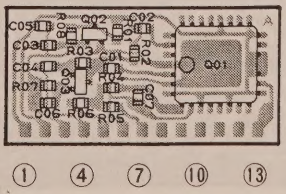
SSB SCAN UNIT (No. 93XX)



Solder side (obverse)

XX)

13MHz RX PLL UNIT (No. 98XX)



Solder side (obverse)

CIRCUIT BOARD ACCESS

BOTTOM COVER

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Reg Unit
Optional Band Modules
½ of RX Unit

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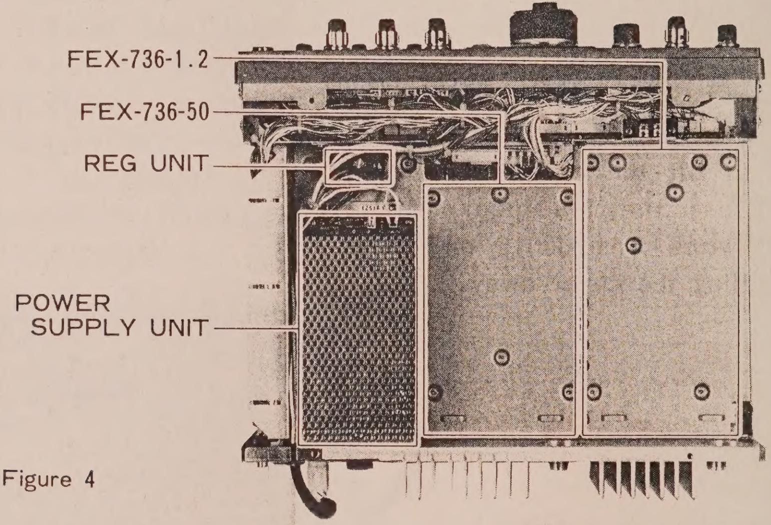


Figure 4

FRONT PANEL HINGE

When the top and bottom covers have been removed, the front can be slid forward and folded down after loosening the two screws on either side, shown in Figure 5. This provides access to the following boards:

Control Unit
Display Unit
VR-A, -B, -C and -D Units
SW-A, -B and -C Unit
Encoder Unit

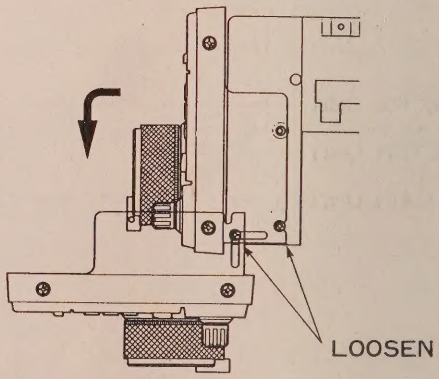


Figure 5

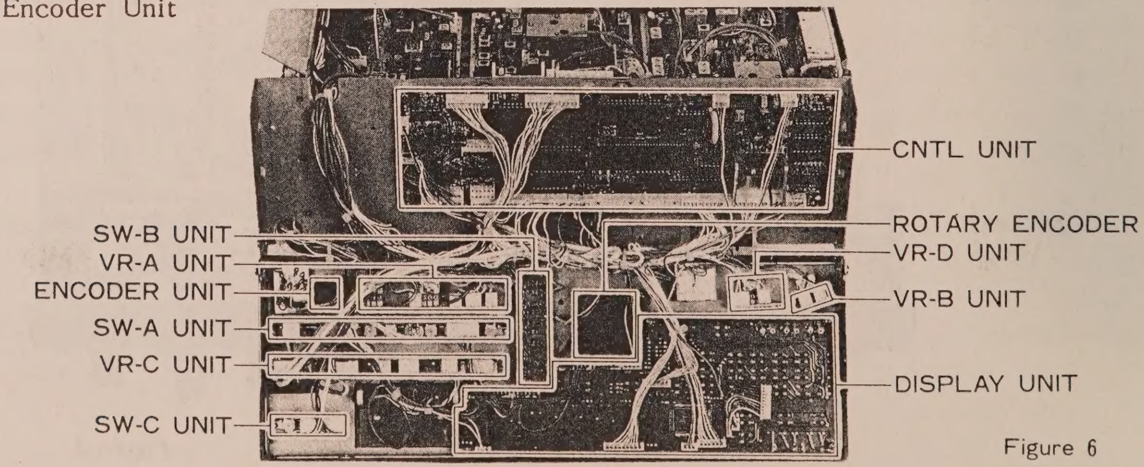
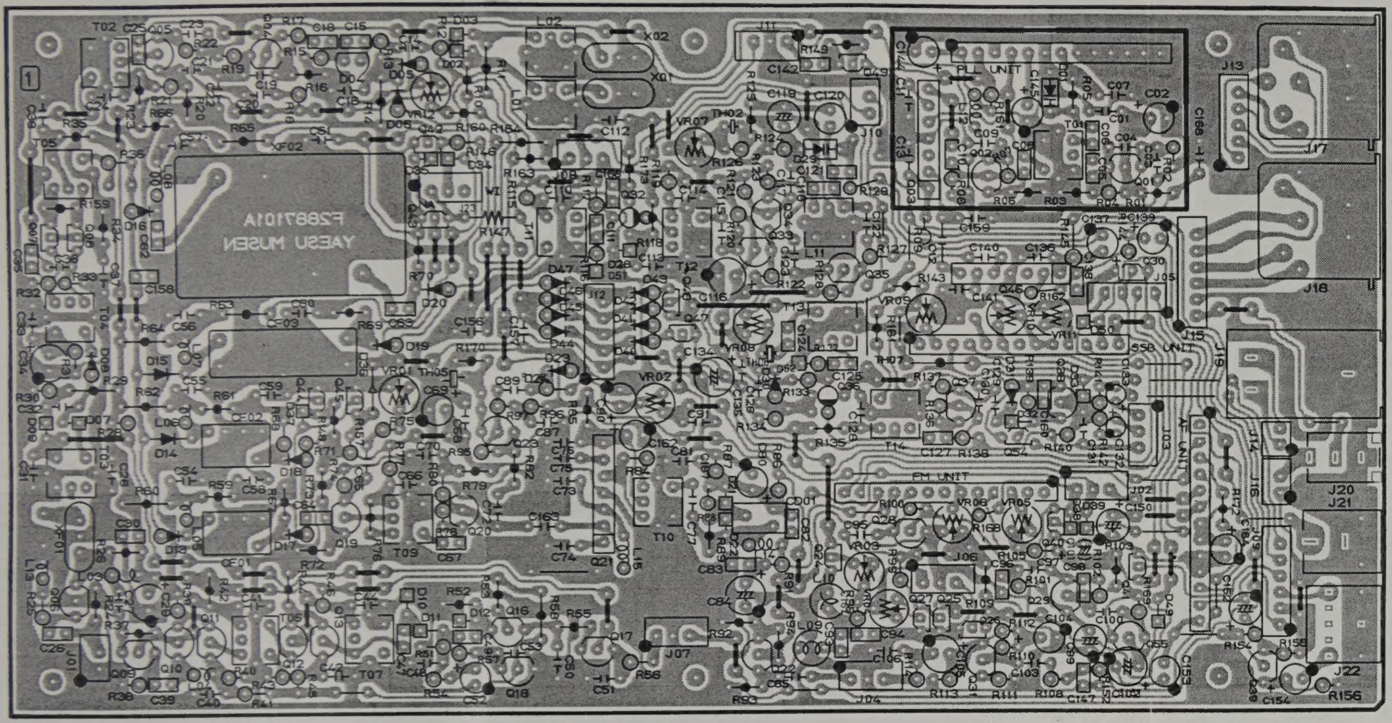


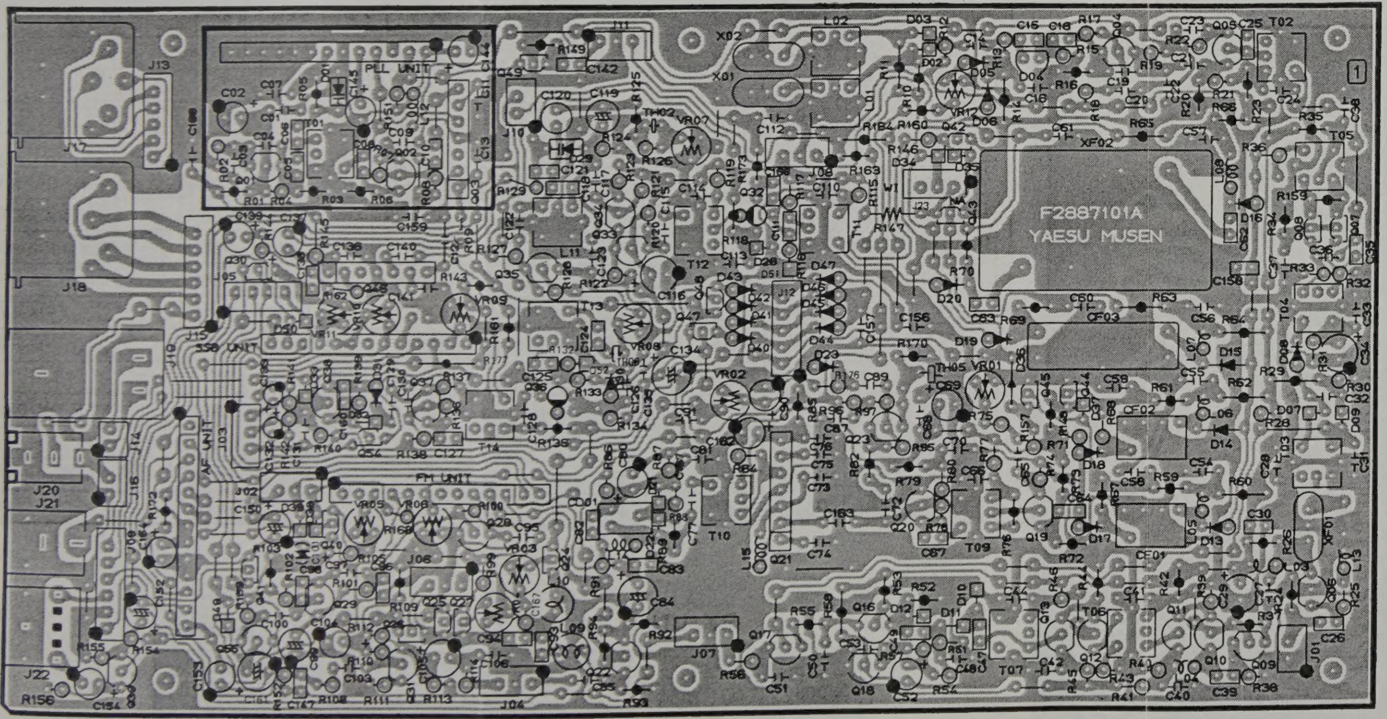
Figure 6

RX UNIT PARTS LAYOUT

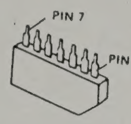
RX UNIT (No. 3×××)



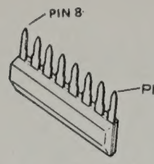
Component side (obverse)



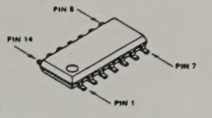
Component side (reverse)



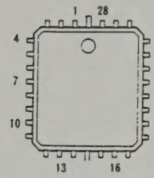
μPC1037H(Q3003,3046)



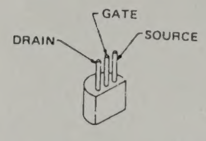
μPC577H(Q3021)



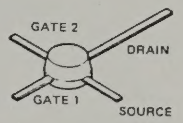
LA6324M(Q9301,9401)



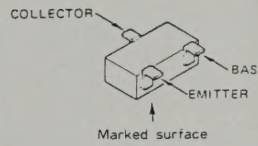
MC145163SL(Q9801)



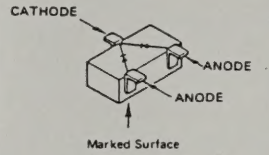
2SK125(Q3006)



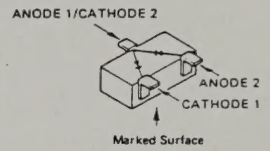
3SK74L(Q3032,3036)



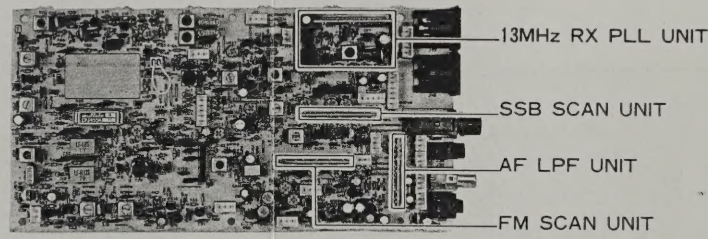
2SC2619F(FB) (Q9802,9803)
2SC2712GR(LG)
(Q9001,9003,9005)
FA1A4M(L33) (Q9402,9403)
FA1F4N(L35) (Q9002,9004)



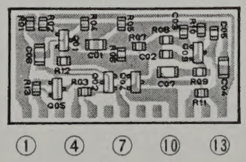
1SS184(B3) (Q9301,9401)



1SS226(C3) (Q9302)

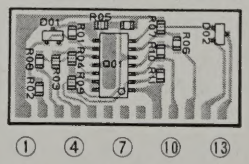


AF LPF UNIT (No.90××)



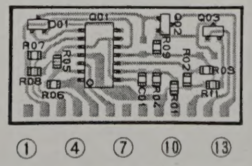
Solder side (obverse)

SSB SCAN UNIT (No. 93××)



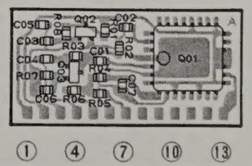
Solder side (obverse)

FM SCAN UNIT (No. 94××)

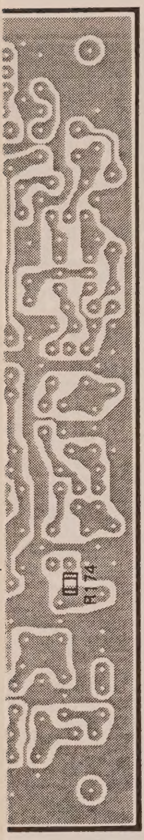


Solder side (obverse)

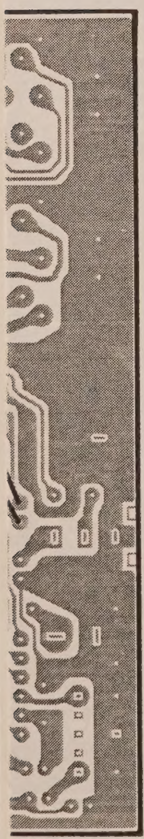
13MHz RX PLL UNIT (No. 98××)



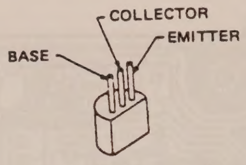
Solder side (obverse)



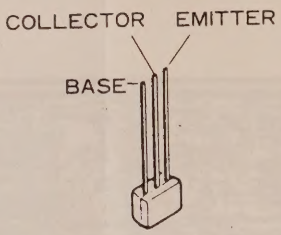
(obverse)



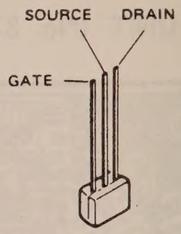
(reverse)



2SA460B(Q3002,3044)
2SA733AP(Q3055)
2SC458C
(Q3010-3013,3016-3018
3020,3022,3023,3028
3029,3031,3033-3035
3037-3039)
2SC535B
(Q3001,3005,3009,3019)



BA1A4M(Q3030)
BA1A4P
(Q3024-3027,3040,3041
3054,3056)
BA1L4L
(Q3042-3045)
BN1A4P(Q3047,3048)



2SK241GR
(Q3007,3008,3049)

RX UNIT VOLTAGE CHART

(DC VOLTS)

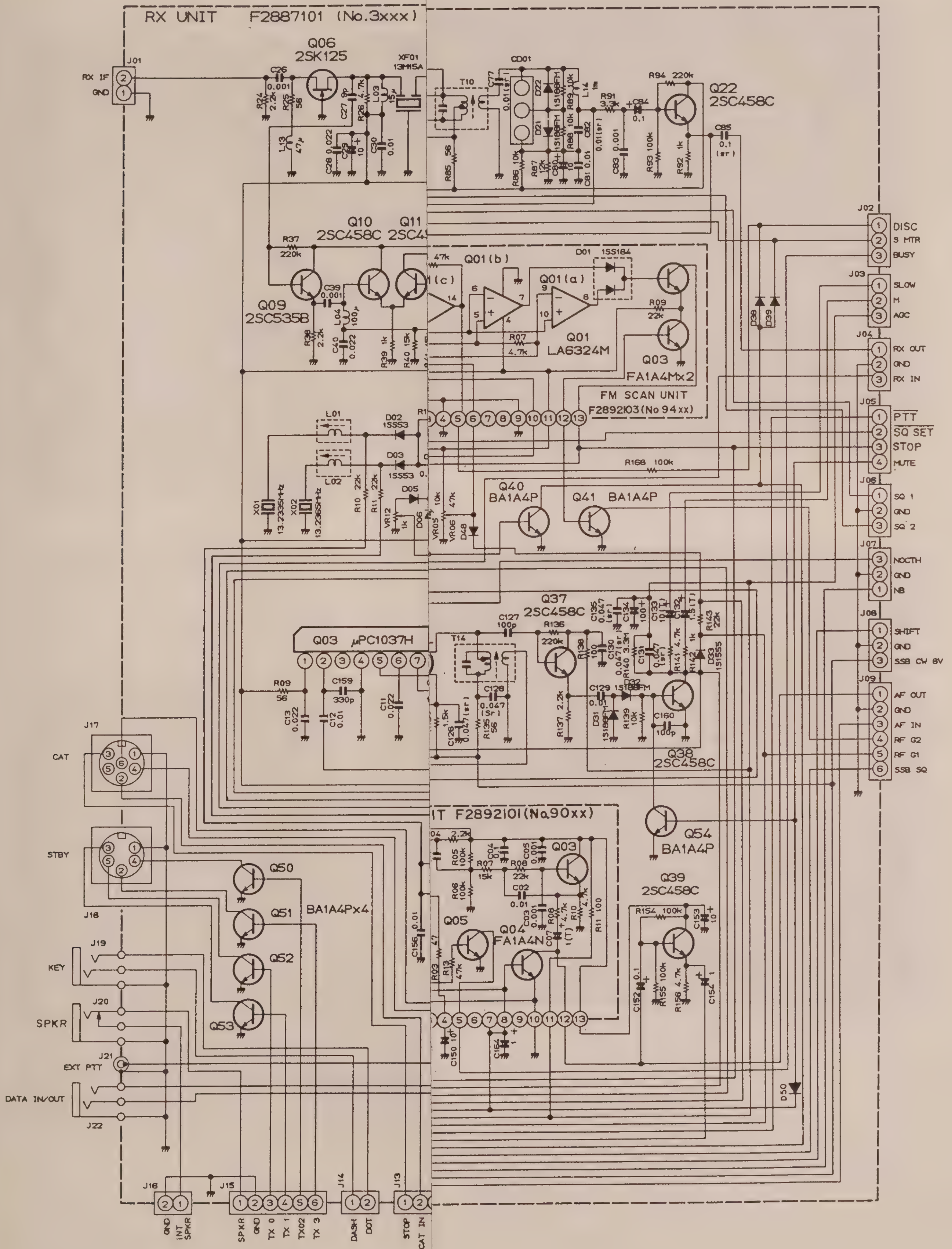
	E(S)	C(D)	B		REMARKS
			(G$_1$)	(G$_2$)	
Q3001	3.06	7.60	3.70		
Q3002	3.6	1.30	2.00		
Q3004	3.0	7.80	3.60		
Q3005	0.67	7.60	1.40		
Q3006	0	7.70	1.20		
Q3007	0.85	7.60			
Q3008	0.85	7.60			
Q3009	3.42	7.50	3.48		
Q3010	1.95	7.50	2.60		
Q3011	1.95	7.50	2.60		
Q3012	1.95	7.60	2.60		
Q3013	1.95	7.60	2.60		
Q3016	0	7.8/0			NB ON/OFF
Q3017	0	4.45			
Q3018	0	5.30	0.28		
Q3019	1.16	7.70	1.83		FM
Q3020	0	3.75	0.68		FM
Q3022	1.40	7.70	2.02		FM
Q3023	0.30	2.80	1.00		FM
Q3024	0	0	2.20/0		FM / $\overline{\text{FM}}$
Q3025	0	0.01	4.76		FM
Q3026	0	0.02	4.76		FM
Q3027	0	0.02	0.01		FM
Q3028	0	0.02	0.02		FM
Q3029	0.03	0.02	0.02		FM
Q3030	0	4.0/0	0/6.7		FM SQLVR MAX/MIN
Q3031	0.84	3.60	1.49		FM
Q3032	0.75	6.65	0.85	2.45	SSB·CW (No SIG.)
Q3033	4.50	7.60	5.10		SSB·CW
Q3034	4.50	6.10	5.00		SSB·CW
Q3035	4.00	7.60	4.65		SSB·CW
Q3036	0.75	6.70	0.84	2.42	SSB·CW (No SIG.)
Q3037	4.70	7.65	5.30		SSB·CW
Q3038	0	2.43	0.05		SSB·CW (No SIG.)
Q3039	3.0	7.7	3.7		
Q3040	0	0	7.5		
Q3041	0	0.01	4.77		
Q3042	0	7.80/0.06	0.06/5.10		$\overline{\text{CW-N}}$ / CW-N
Q3043	0	7.80/0.06	0.06/5.10		$\overline{\text{SSB·CW}}$ / SSB·CW
Q3044	0	7.80/0.06	0.60/5.20		$\overline{\text{FM-N}}$ / FM-N
Q3045	0	7.80/0.06	0.06/2.70		$\overline{\text{FM-W}}$ / FM-W
Q3047	7.86	7.71/0.01	0.06/7.82		$\overset{\text{FM}}{\text{FM-N}}$ / $\overline{\text{FM·FM-N}}$
Q3048	7.86	0.08/7.52	7.83/0.60		$\overset{\text{FM}}{\text{FM-N}}$ / $\overline{\text{FM·FM-N}}$
Q3049	0	3.14	0		
Q3054	0	0.01/0.04	4.84/0.01		MUTE ON/OFF
Q3055	7.50	0.07	7.45		FM
Q3056	0	0.10/1.63	4.84/0.01		MUTE ON/OFF

RX UNIT IC VOLTAGE CHART

(DC VOLTS)

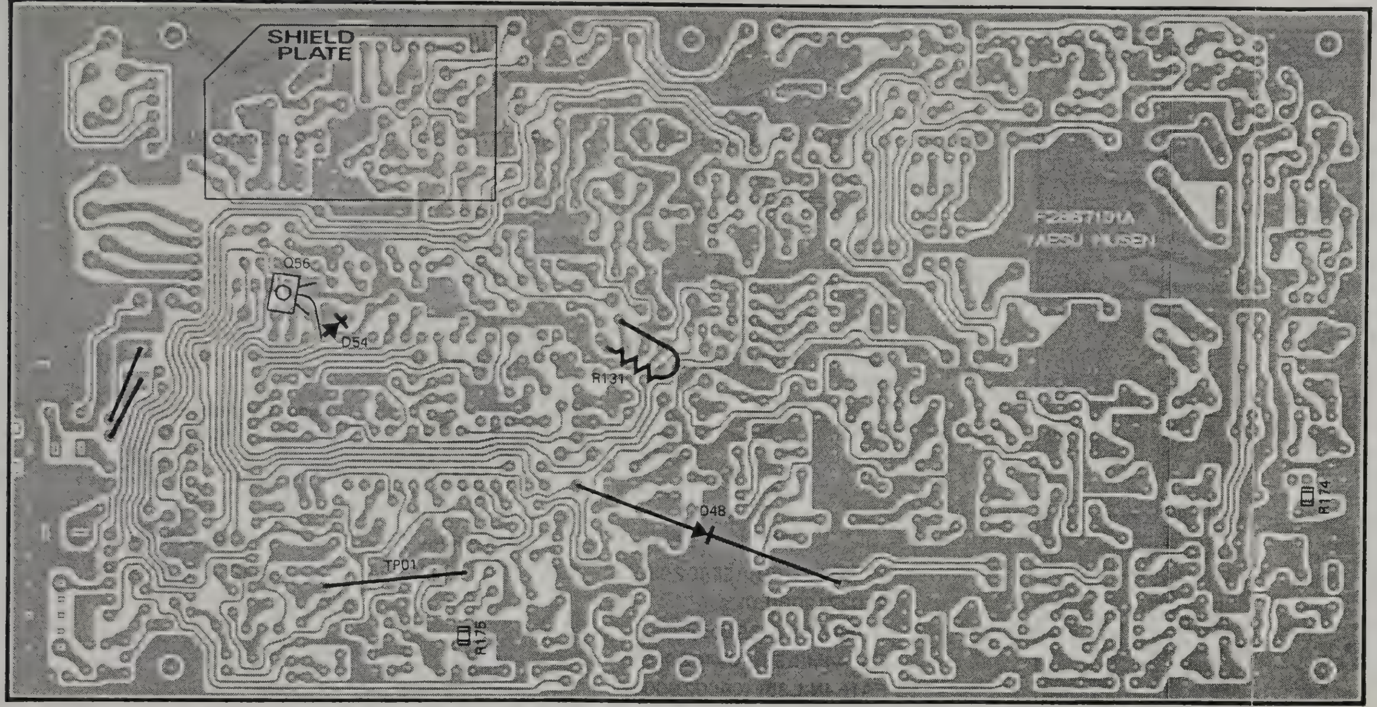
	1	2	3	4	5	6	7	REMARKS
Q3003	7.00	6.15	—	0	3.11	3.11	3.11	
Q3021	5.10	1.90	1.90	0	7.60	2.80	7.00	FM
Q3046	6.94	6.09	—	0	3.07	3.07	3.07	

CIRCUIT DIAGRAM

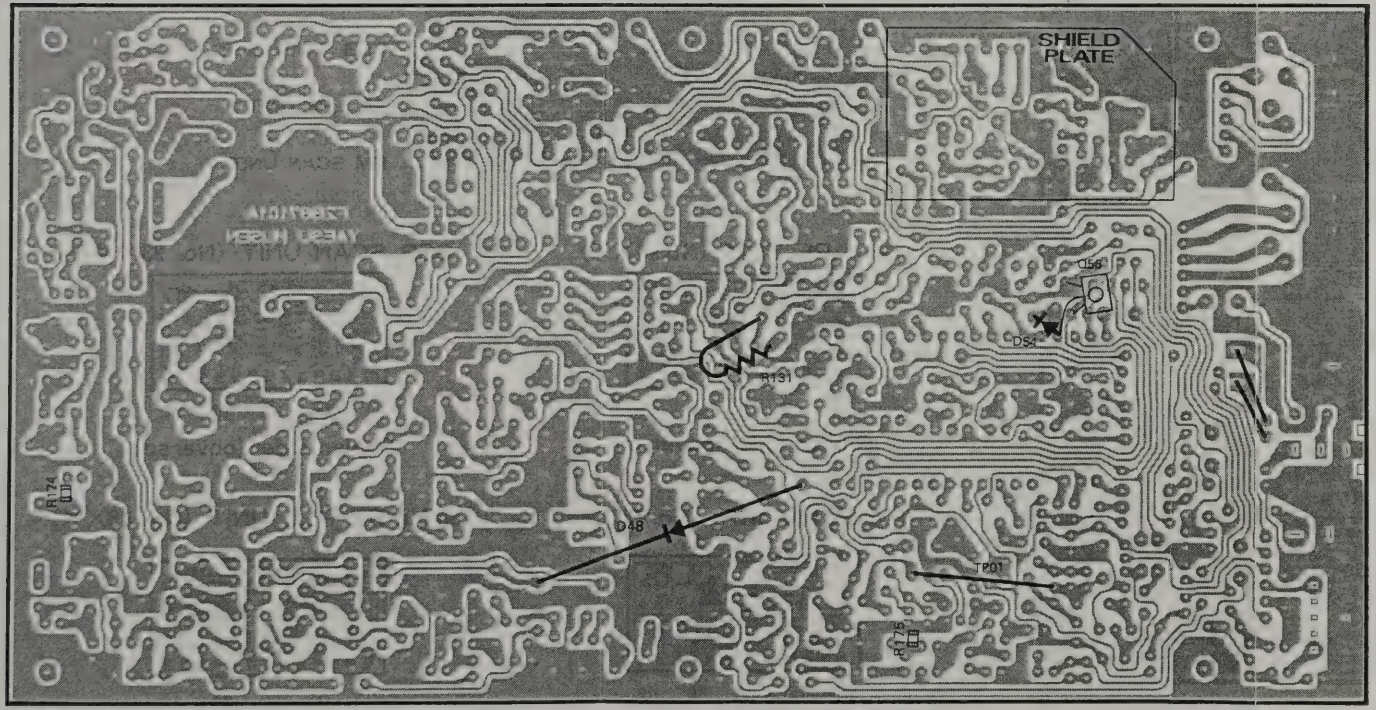


RESISTOR VALUES ARE IN Ω. 1/6
CAPACITOR VALUES ARE IN μF:
INDUCTOR VALUES ARE IN HENRI
DIODES ARE TYPE 1SS270 UNLES
(Sr)CAPACITORS ARE SEMICONDU
(T)CAPACITORS ARE TANTALUM.

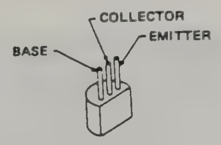
RX UNIT PARTS LAYOUT



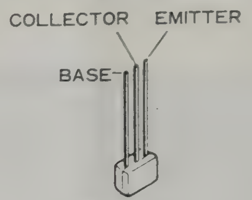
Component side (obverse)



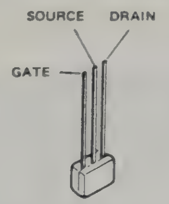
Component side (reverse)



2SA460B(Q3002,3044)
2SA733AP(Q3055)
2SC458C
(Q3010-3013,3016-3018
3020,3022,3023,3028
3029,3031,3033-3035
3037-3039)
2SC535B
(Q3001,3005,3009,3019)



BA1A4M(Q3030)
BA1A4P
(Q3024-3027,3040,3041
3054,3056)
BA1L4L
(Q3042-3045)
BN1A4P(Q3047,3048)



2SK241GR
(Q3007,3008,3049)

RX UNIT VOLTAGE CHART

(DC VOLTS)

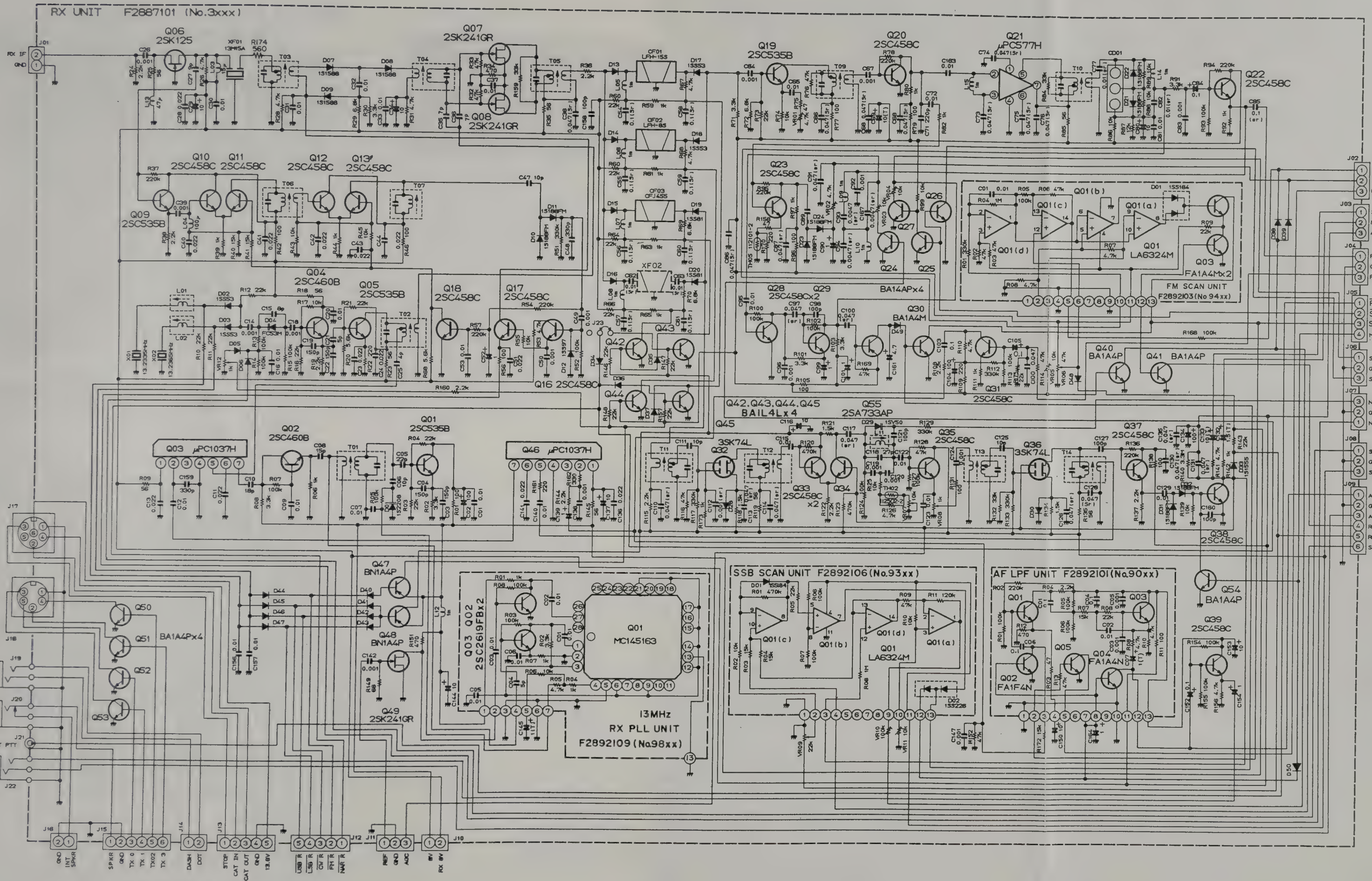
	E(S)	C(D)	B (G₁)	B (G₂)	REMARKS
Q3001	3.06	7.60	3.70		
Q3002	3.6	1.30	2.00		
Q3004	3.0	7.80	3.60		
Q3005	0.67	7.60	1.40		
Q3006	0	7.70	1.20		
Q3007	0.85	7.60			
Q3008	0.85	7.60			
Q3009	3.42	7.50	3.48		
Q3010	1.95	7.50	2.60		
Q3011	1.95	7.50	2.60		
Q3012	1.95	7.60	2.60		
Q3013	1.95	7.60	2.60		
Q3016	0	7.8/0			NB ON/OFF
Q3017	0	4.45			
Q3018	0	5.30	0.28		
Q3019	1.16	7.70	1.83		FM
Q3020	0	3.75	0.68		FM
Q3022	1.40	7.70	2.02		FM
Q3023	0.30	2.80	1.00		FM
Q3024	0	0	2.20/0		FM / $\overline{\text{FM}}$
Q3025	0	0.01	4.76		FM
Q3026	0	0.02	4.76		FM
Q3027	0	0.02	0.01		FM
Q3028	0	0.02	0.02		FM
Q3029	0.03	0.02	0.02		FM
Q3030	0	4.0/0	0/6.7		FM SQLVR MAX/MIN
Q3031	0.84	3.60	1.49		FM
Q3032	0.75	6.65	0.85	2.45	SSB·CW (No SIG.)
Q3033	4.50	7.60	5.10		SSB·CW
Q3034	4.50	6.10	5.00		SSB·CW
Q3035	4.00	7.60	4.65		SSB·CW
Q3036	0.75	6.70	0.84	2.42	SSB·CW (No SIG.)
Q3037	4.70	7.65	5.30		SSB·CW
Q3038	0	2.43	0.05		SSB·CW (No SIG.)
Q3039	3.0	7.7	3.7		
Q3040	0	0	7.5		
Q3041	0	0.01	4.77		
Q3042	0	7.80/0.06	0.06/5.10		$\overline{\text{CW-N}}$ / CW-N
Q3043	0	7.80/0.06	0.06/5.10		$\overline{\text{SSB·CW}}$ / SSB·CW
Q3044	0	7.80/0.06	0.60/5.20		$\overline{\text{FM-N}}$ / FM-N
Q3045	0	7.80/0.06	0.06/2.70		$\overline{\text{FM-W}}$ / FM-W
Q3047	7.86	7.71/0.01	0.06/7.82		FM FM-N / $\overline{\text{FM·FM-N}}$
Q3048	7.86	0.08/7.52	7.83/0.60		FM FM-N / $\overline{\text{FM·FM-N}}$
Q3049	0	3.14	0		
Q3054	0	0.01/0.04	4.84/0.01		MUTE ON/OFF
Q3055	7.50	0.07	7.45		FM
Q3056	0	0.10/1.63	4.84/0.01		MUTE ON/OFF

RX UNIT IC VOLTAGE CHART

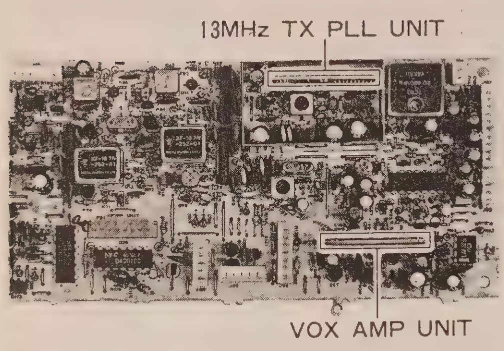
(DC VOLTS)

	1	2	3	4	5	6	7	REMARKS
Q3003	7.00	6.15	—	0	3.11	3.11	3.11	
Q3021	5.10	1.90	1.90	0	7.60	2.80	7.00	FM
Q3046	6.94	6.09	—	0	3.07	3.07	3.07	

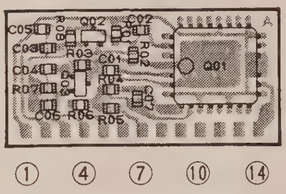
RX UNIT CIRCUIT DIAGRAM



RESISTOR VALUES ARE IN Ω. 1/6W:
CAPACITOR VALUES ARE IN μF:
INDUCTOR VALUES ARE IN HENRIES. UNLESS OTHERWISE NOTED.
DIODES ARE TYPE 1SS270 UNLESS OTHERWISE NOTED.
(Sr)CAPACITORS ARE SEMICONDUCTOR CERAMIC. 25wv.
(T)CAPACITORS ARE TANTALUM.

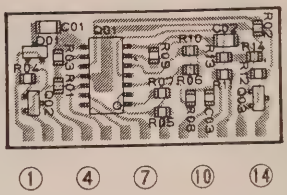


13MHz TX PLL UNIT
(No. 97××)

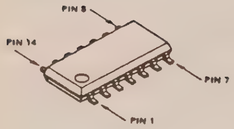


Solder side (obverse)

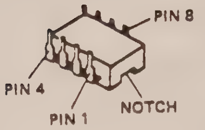
VOX AMP UNIT
(No. 99××)



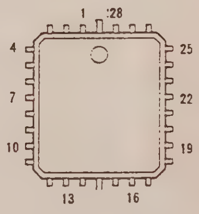
Solder side (obverse)



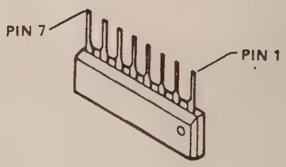
LA6324M(Q9901)



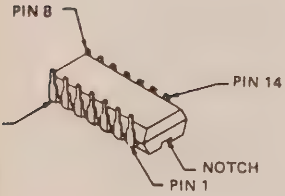
LA6358(Q4011)



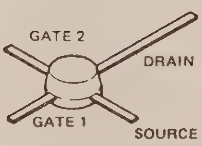
MC145163SL(Q9701)



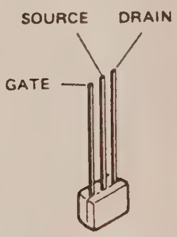
µPC1037H
(Q4015,4016,4020)



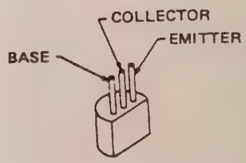
LA6324(Q4003)
µPD4001BC(Q4026)
µPD4011BC(Q4027)



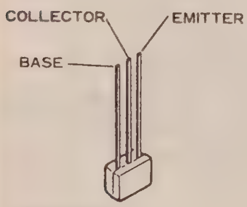
3SK74L(Q4010,4022)



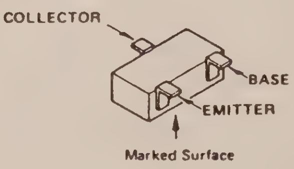
2SK192AGR(Q4024)



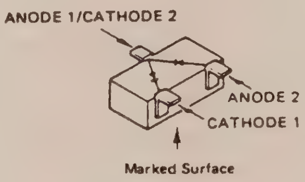
2SA733AQ(Q4025)
2SA1528
(Q4030,4033,4035)
2SC458C
(Q4006,4007,4018
4023,4032,4034
4037)
2SC460B
(Q4009,4014,4014
4017,4019,4021
4036)
2SC535B(Q4001)
2SC1815GR(Q4002)



BA1A4M(Q4028)
BA1A4P
(Q4004,4008,4040)
BA1L3Z(Q4005)
BA1L4M(Q4038,4039)
BN1A4P(Q4029,4031)

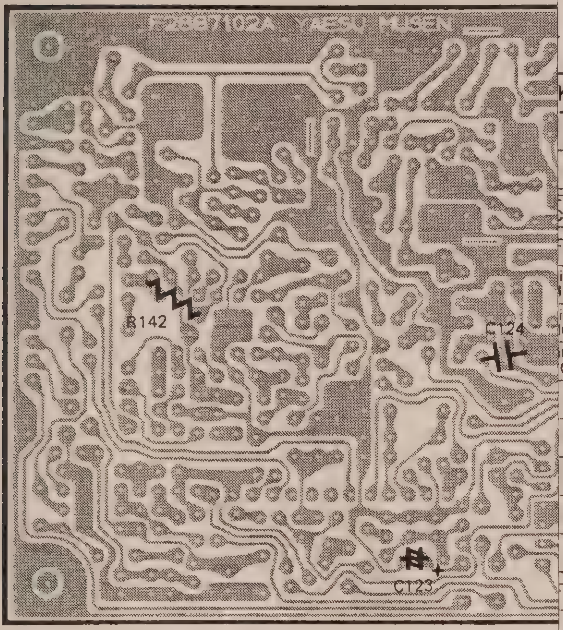


2SC2619F(FB) (Q9702,9703)
2SC2712GR(LG) (Q9902,9903)



1SS226(C3) (Q9901)

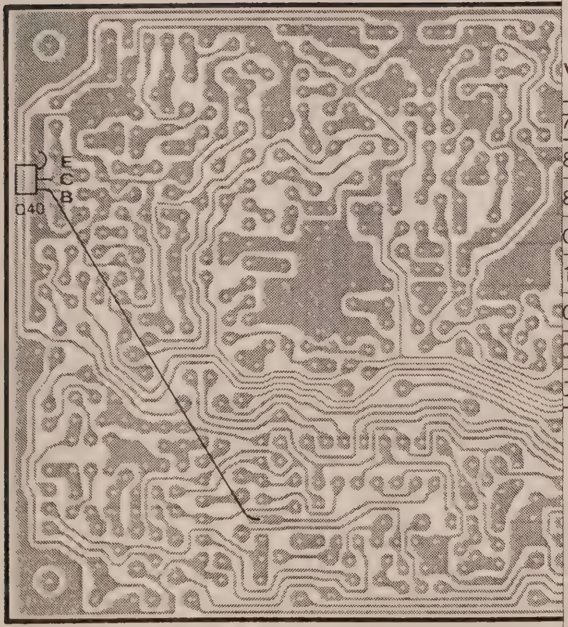
IT PARTS LAYOUT



VOLTAGE CHART

(DC VOLTS)

KS		E(S)	C(D)	B		REMARKS
				(G₁)	(G₂)	
	Q4023	0	7.6	0		
	Q4024	2.69	7.88	0.99		CW ALC/DISC @ 10W output
FM-N CW-N	Q4025	3.30	1.74	2.70		
FM	Q4028	0.62/0.79	3.30/0	0.01/1.75		CW KEY UP/DOWN
ithout IC input	Q4029	7.90	7.85/0	0/7.85		SSB / $\overline{\text{SSB}}$
ithout C input	Q4030	7.90	7.85/0	0.70/7.90		CW CW-N / $\overline{\text{CW,CW-N}}$
thout C input	Q4031	7.90	7.80/0.01	0/7.80		FM,FM-N/$\overline{\text{FM,FM-N}}$
	Q4032	0	7.87/0.02	0.01/0.074		TX / RX
	Q4033	7.90	0.03/0.02	7.90/7.80		TX / RX
	Q4034	0	7.90/0	0/0.75		TX / RX
	Q4035	7.90	0.02/0	7.90/0		TX / RX
	Q4036	3.4	7.4	4.1		
F/ON	Q4037	0	1.08	0.48		@ 10W output
	Q4038	0	7.70/0	0.04/7.10		CW KEY UP/DOWN
	Q4039	0	0.04/7.10	4.15/0		CW KEY UP/DOWN
I CCW	Q4040	0	0	0/7.70		TX / RX



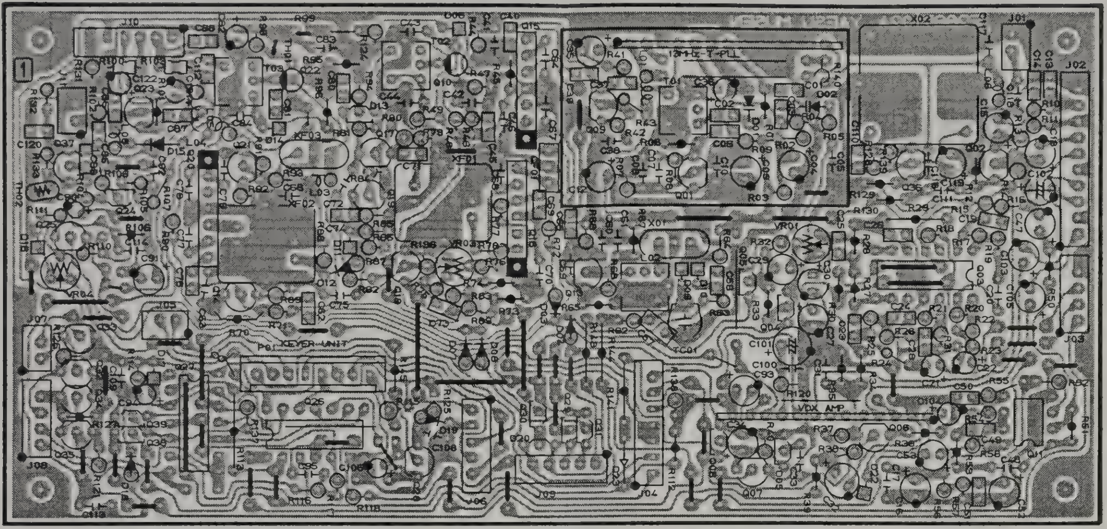
VOLTAGE CHART

(DC VOLTS)

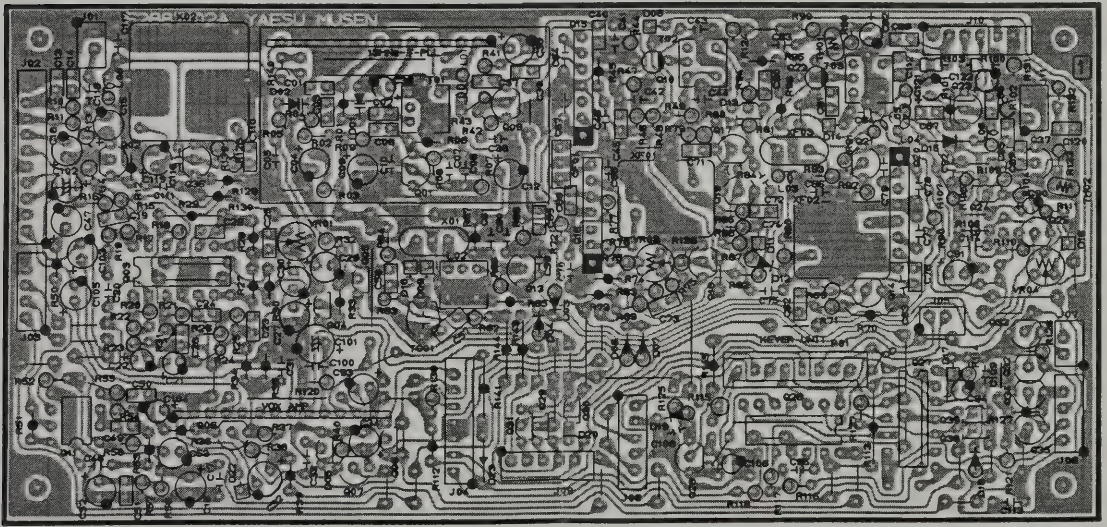
7	8	9	10	11	12	13	14	REMARKS
81	2.81	2.81	2.35	0	2.77	2.77	2.76	
82	6.75							SSB
05								SSB
1								SSB
05								SSB
0	L/L	H/L	L/H	H/L	L/L	L/H	7.90	CW KEY UP/DOWN H≑8.0 L≑0
0	L/H	H/H	L/L	H/H	L/H	L/L	7.90	

TX UNIT PARTS LAYOUT

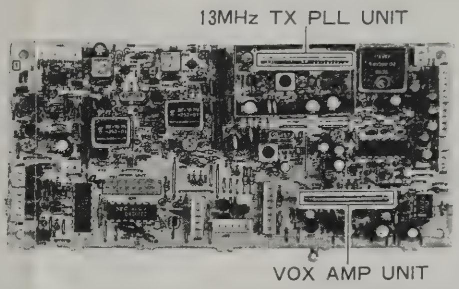
TX UNIT (No. 4XXX)



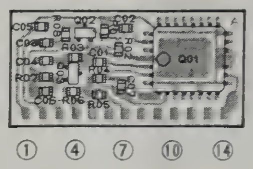
Component side (obverse)



Component side (reveres)

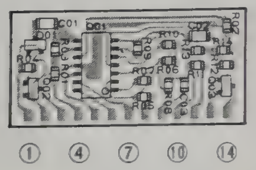


13MHz TX PLL UNIT
(No. 97XX)

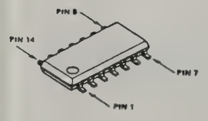


Solder side (obverse)

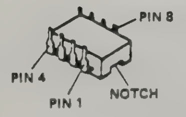
VOX AMP UNIT
(No. 99XX)



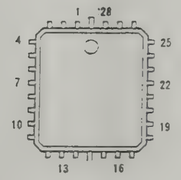
Solder side (obverse)



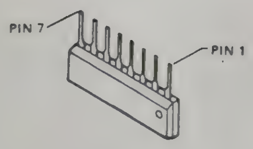
LA6324M(Q9901)



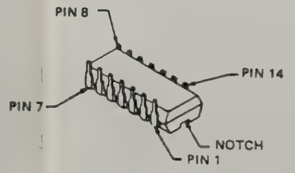
LA6358(Q4011)



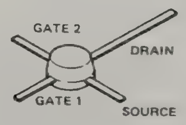
MC145163SL(Q9701)



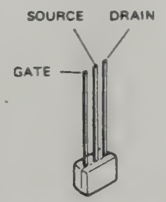
μPC1037H
(Q4015,4016,4020)



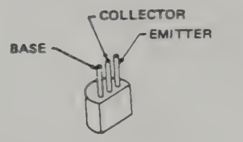
LA6324(Q4003)
μPD4001BC(Q4026)
μPD4011BC(Q4027)



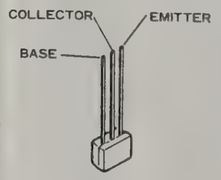
3SK74L(Q4010,4022)



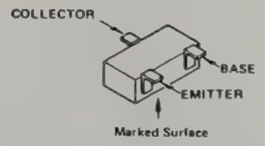
2SK192AGR(Q4024)



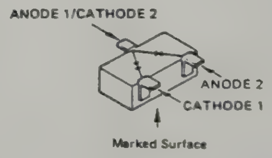
2SA733AQ(Q4025)
2SA1528
(Q4030,4033,4035)
2SC458C
(Q4006,4007,4018
4023,4032,4034
4037)
2SC460B
(Q4009,4014,4014
4017,4019,4021
4036)
2SC535B(Q4001)
2SC1815GR(Q4002)



BA1A4M(Q4028)
BA1A4P
(Q4004,4008,4040)
BA1L3Z(Q4005)
BA1L4M(Q4038,4039)
BN1A4P(Q4029,4031)

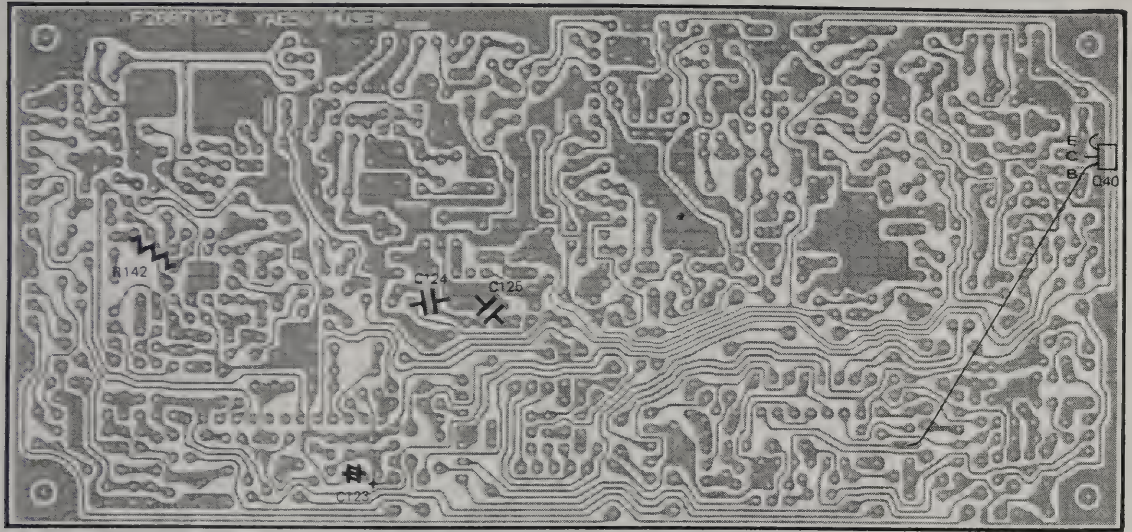


2SC2619F(FB) (Q9702,9703)
2SC2712GR(LG) (Q9902,9903)

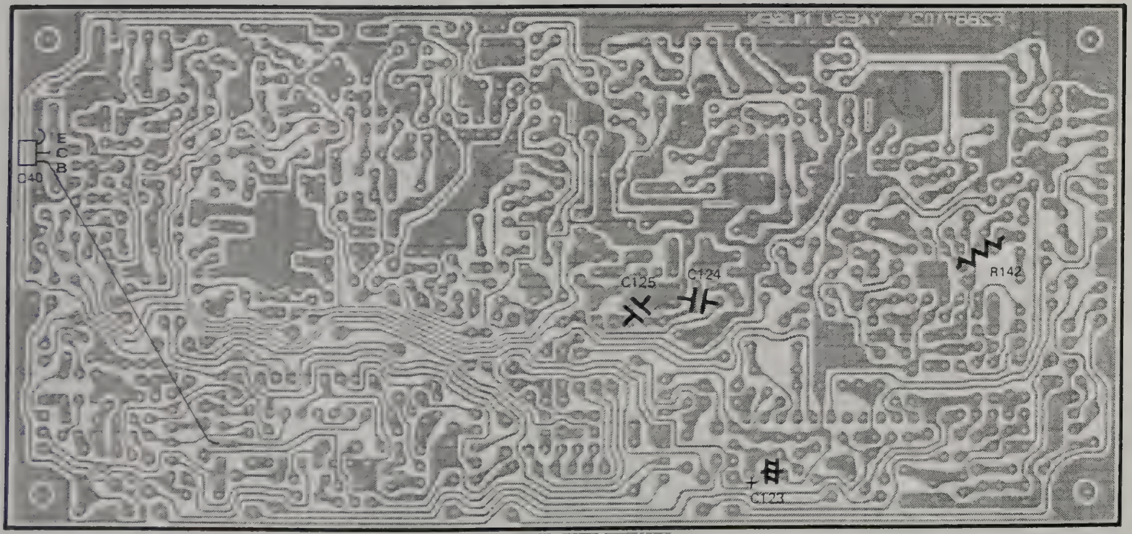


1SS226(C3) (Q9901)

TX UNIT PARTS LAYOUT



Solder side (obverse)



Solder side (reverse)

TX UNIT VOLTAGE CHART

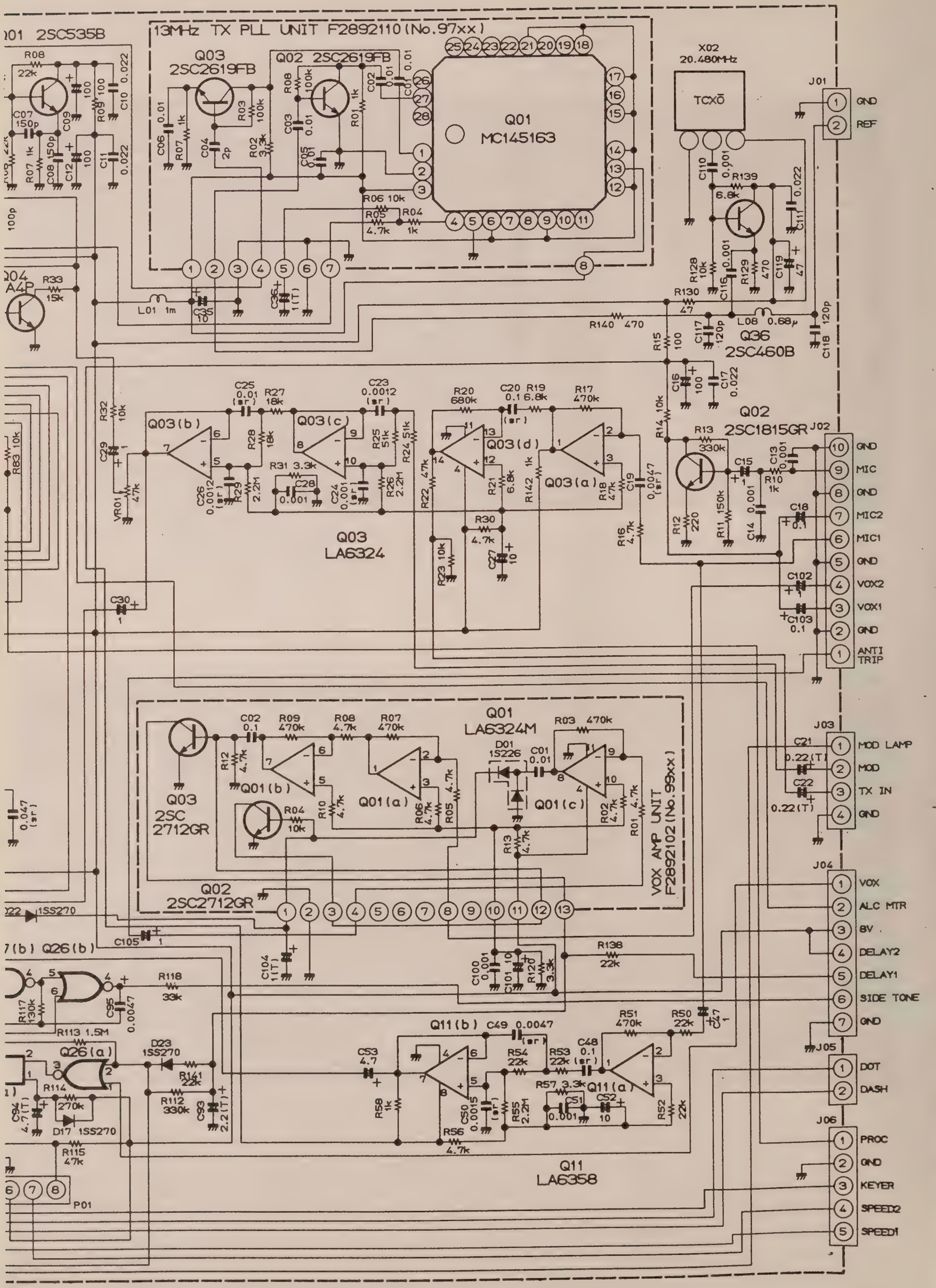
(DC VOLTS)

	E(S)	C(D)	B (G_1)	B (G_2)	REMARKS
Q4001	2.8	7.5	3.4		
Q4002	3.42	7.41	4.11		
Q4004	0	0	4.96/0.04		SSB·CW FM / FM-N CW-N
Q4005	0	0	7.2/0		SSB CW / FM
Q4006	0.14/0.16	4.35/3.90	0.80/0.55		with MIC input / without MIC input
Q4007	0	12.10/0.20	0.42/0.78		with MIC input / without MIC input
Q4008	0	0.43/0.78	0		with MIC input / without MIC input
Q4009	1.3	3.5	2.0		
Q4010	0	7.0	1.5	2.0	
Q4013	2.85	7.72	3.47		SSB
Q4014	1.30	3.57	1.96		SSB
Q4017	0.8	3.5	1.4		SSB
Q4018	0	0/0.06	0/0.69		SSB, PROC OFF/ON
Q4019	2.82	7.30	3.52		SSB
Q4021	1.40	5.27	2.06		SSB
Q4022	0	7.13	1.43	2.68	DRIVE control CCW
Q4023	0	7.6	0		
Q4024	2.69	7.88	0.99		CW ALC/DISC @ 10W output
Q4025	3.30	1.74	2.70		
Q4028	0.62/0.79	3.30/0	0.01/1.75		CW KEY UP/DOWN
Q4029	7.90	7.85/0	0/7.85		SSB / $\overline{\text{SSB}}$
Q4030	7.90	7.85/0	0.70/7.90		CW CW-N / $\overline{\text{CW,CW-N}}$
Q4031	7.90	7.80/0.01	0/7.80		FM,FM-N/$\overline{\text{FM,FM-N}}$
Q4032	0	7.87/0.02	0.01/0.074		TX / RX
Q4033	7.90	0.03/0.02	7.90/7.80		TX / RX
Q4034	0	7.90/0	0/0.75		TX / RX
Q4035	7.90	0.02/0	7.90/0		TX / RX
Q4036	3.4	7.4	4.1		
Q4037	0	1.08	0.48		@ 10W output
Q4038	0	7.70/0	0.04/7.10		CW KEY UP/DOWN
Q4039	0	0.04/7.10	4.15/0		CW KEY UP/DOWN
Q4040	0	0	0/7.70		TX / RX

TX UNIT IC VOLTAGE CHART

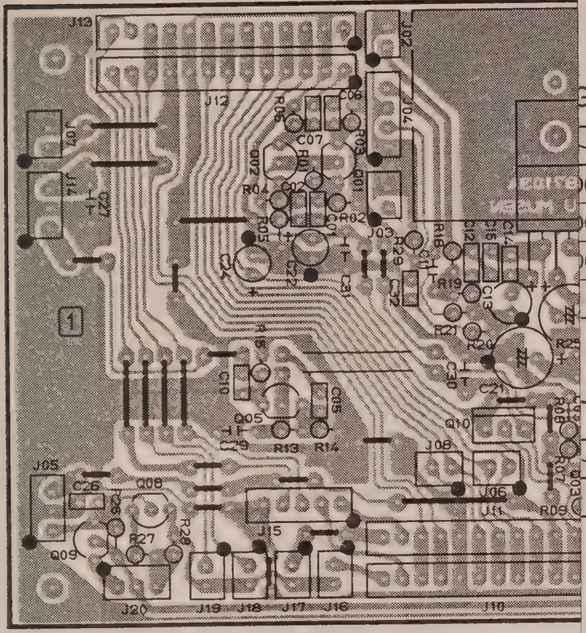
(DC VOLTS)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	REMARKS
Q4003	2.77	2.78	2.76	6.76	2.80	2.81	2.81	2.81	2.81	2.35	0	2.77	2.77	2.76	
Q4011	2.80	2.80	2.80	0	2.35	2.82	2.82	6.75							SSB
Q4015	7.00	6.10	—	0	3.05	3.05	3.05								SSB
Q4016	7.0	6.1	—	0	3.1	3.1	3.1								SSB
Q4020	6.90	6.10	—	0	3.05	3.05	3.05								SSB
Q4026	L/L	H/L	L/L	L/H	H/H	L/L	0	L/L	H/L	L/H	H/L	L/L	L/H	7.90	CW KEY UP/DOWN H÷8.0 L÷0
Q4027	L/H	H/L	L/H	L/3.81	H/H	L/3.67	0	L/H	H/H	L/L	H/H	L/H	L/L	7.90	


13MHz TX PLL UNIT F2892110 (No.97xx)
Q03 2SC2619FB
Q02 2SC2619FB
Q01 MC145163
X02 20.480MHz
TCXO
J01
GND
REF
R139 6.8k
C110 0.001
C111 0.022
R128 10k
C116 0.001
R129 470
C119 47
R130 47
R140 470
C117 120p
L08 0.68μ
C118 120p
Q36 2SC460B
R15 100
C16 100
C17 0.022
R14 10k
Q02 2SC1815GR
R13 330k
C15 1
C13 0.001
R10 1k
R12 220
R11 150k
C14 0.001
J02
GND
MIC
GND
MIC2
MIC1
GND
VOX2
VOX1
GND
ANTI TRIP
C18 0.1
C102 1
C103 0.1
Q03(b)
Q03(c)
Q03(d)
Q03(a)
Q03 LA6324
C25 0.01 (sr)
R27 18k
C23 0.0012 (sr)
R20 680k
C20 0.1 (sr)
R19 6.8k
R17 470k
R32 10k
C29 1
VR01 47k
R28 18k
R29 2.2M
C26 0.0012 (sr)
R31 3.3k
C28 0.001
C24 0.001 (sr)
R25 51k
R24 51k
R26 2.2M
R22 47k
R21 6.8k
R142 1k
R18 47k
C19 0.0047 (sr)
R16 4.7k
R30 4.7k
C27 10
R23 10k
C30 1
L01 1m
C35 10
C36 1(T)
R33 15k
Q04 A4P
R08 22k
C07 150p
C08 150p
C09 100
C12 100
R09 100
C10 0.022
C11 0.022
R07 1k
2SC535B
R83 10k
100p
R08 100k
R03 100k
R02 3.3k
R07 1k
C06 0.01
C04 2p
C03 0.01
C05 0.01
R01 1k
C02 0.01
C01 0.01
R06 10k
R05 4.7k
R04 1k
VOX AMP UNIT F2892102 (No.99xx)
Q01 LA6324M
Q01(a)
Q01(b)
Q01(c)
Q03 2SC2712GR
Q02 2SC2712GR
C02 0.1
R09 470k
R08 4.7k
R07 470k
R03 470k
R12 4.7k
R10 4.7k
R04 10k
R06 4.7k
R05 4.7k
D01 1S226
C01 0.01
R02 4.7k
R01 4.7k
R13 4.7k
C100 0.001
C101 10
R120 3.3k
C104 1(T)
C105 1
R138 22k
J03
MOD LAMP
MOD
TX IN
GND
C21 0.22(T)
C22 0.22(T)
J04
VOX
ALC MTR
8V
DELAY2
DELAY1
SIDE TONE
GND
J05
DOT
DASH
J06
PROC
GND
KEYER
SPEED2
SPEED1
Q11(a)
Q11(b)
Q11 LA6358
C49 0.0047 (sr)
C48 0.1 (sr)
R51 470k
R50 22k
C47 1
R54 22k
R53 22k
R57 3.3k
C51 0.001
C52 10
R52 22k
R55 2.2M
C50 0.0015 (sr)
R56 4.7k
R58 1k
C53 4.7
R118 33k
C95 0.0047
Q26(a)
Q26(b)
D22 1SS270
D23 1SS270
R141 22k
R112 330k
C93 2.2(T)
R113 1.5M
R117 130k
R114 270k
C94 4.7(T)
D17 1SS270
R115 47k
P01
C 0.047 (sr)

/CIRCUIT DIAGRAM

AF UNIT (No. 5XXX)



Component sid

GE CHART

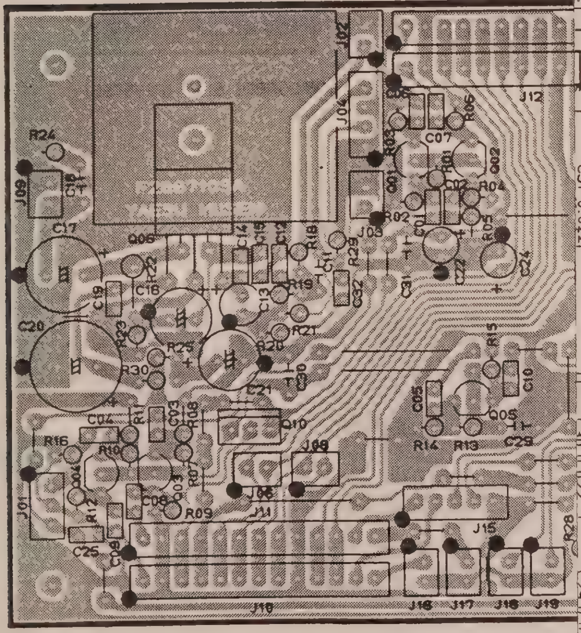
(DC VOLTS)

	E(S)	C(D)	B (G₁)	(G₂)	REMARKS
05	3.4	8.0	4.1		
08	0.01/12.50	0.01/13.60	0.01/12.50		PRE AMP OFF/ON
09	0.01/13.60	13.60	0.01/13.10		PRE AMP OFF/ON

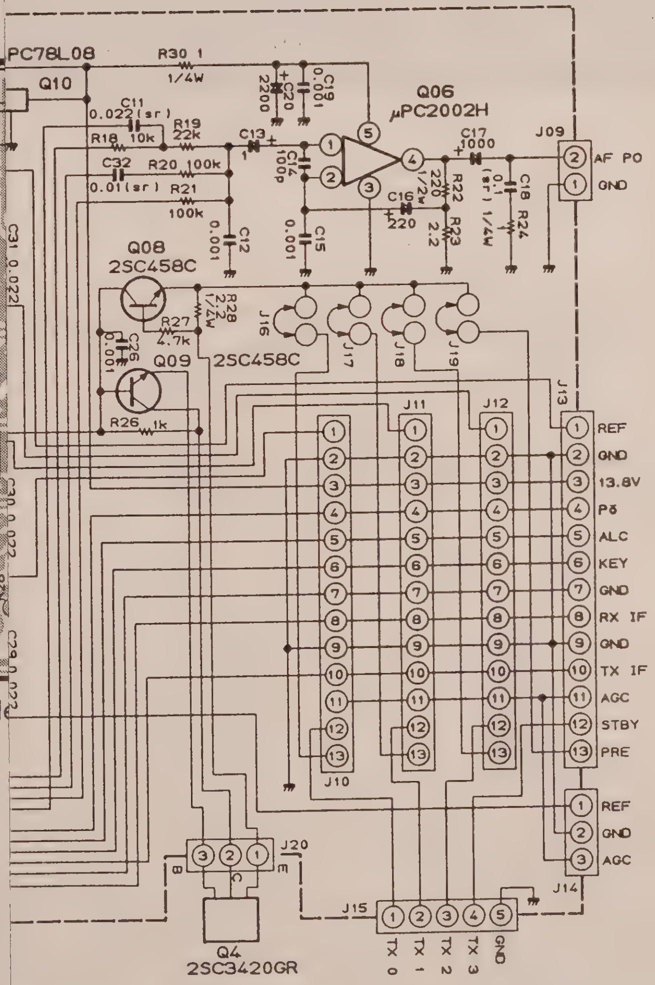
TAGE CHART

(DC VOLTS)

	1(IN)	2(GND)	3(OUT)	4	5	REMARKS
10	13.8	0	8.0			

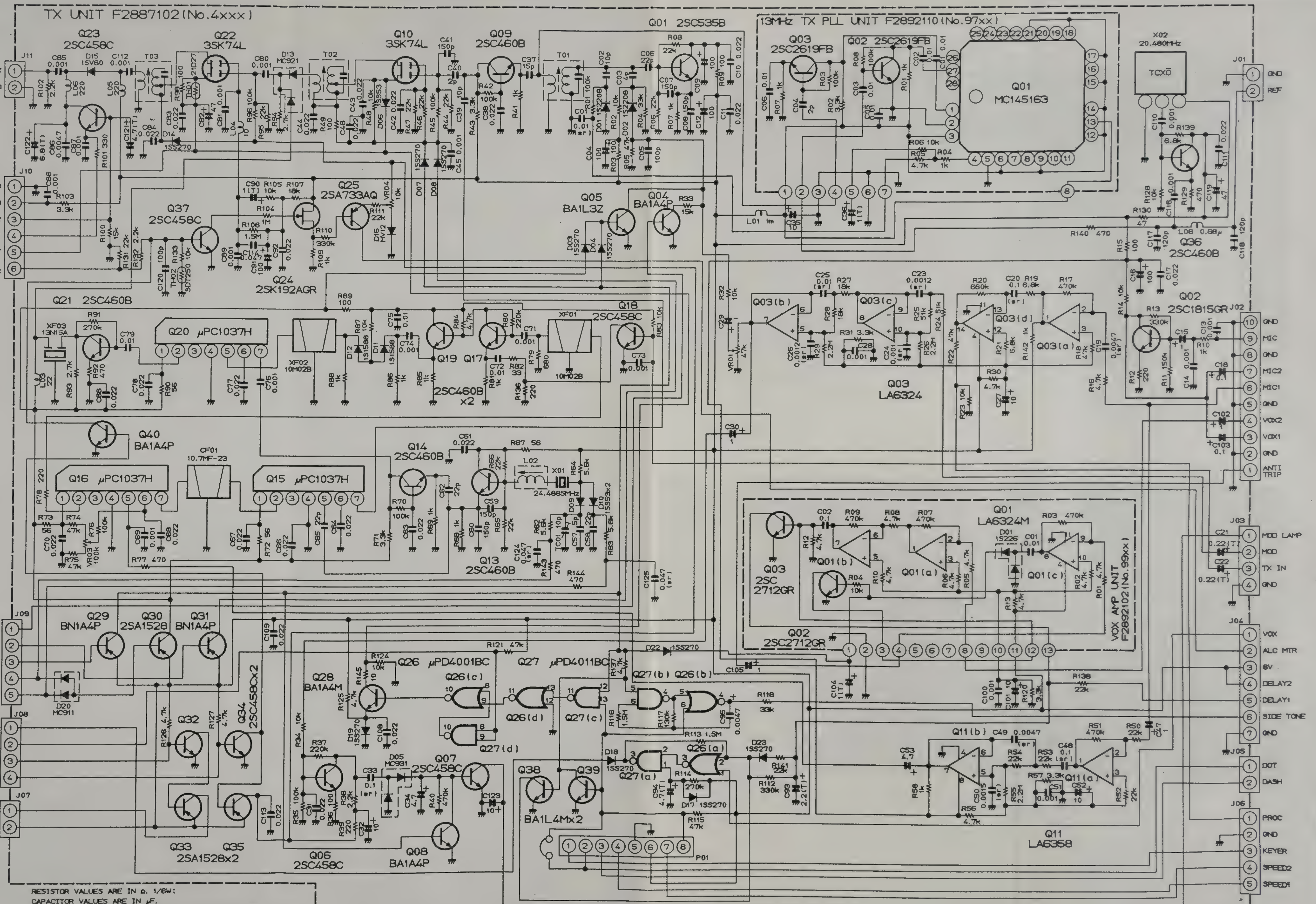


Component side



AMIC. 25wv:

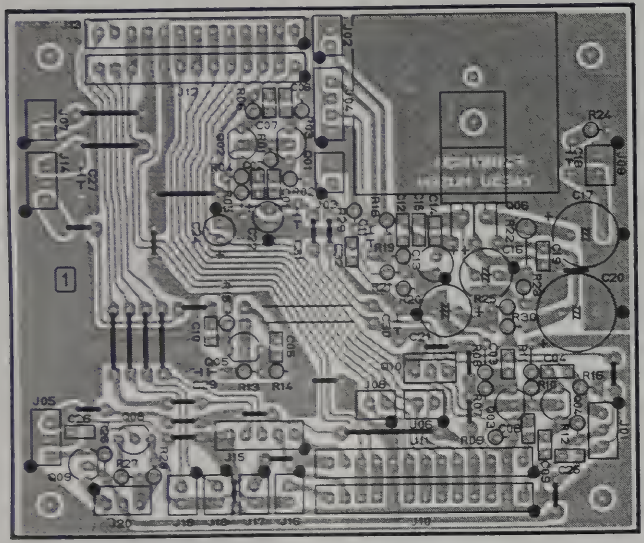
TX UNIT CIRCUIT DIAGRAM



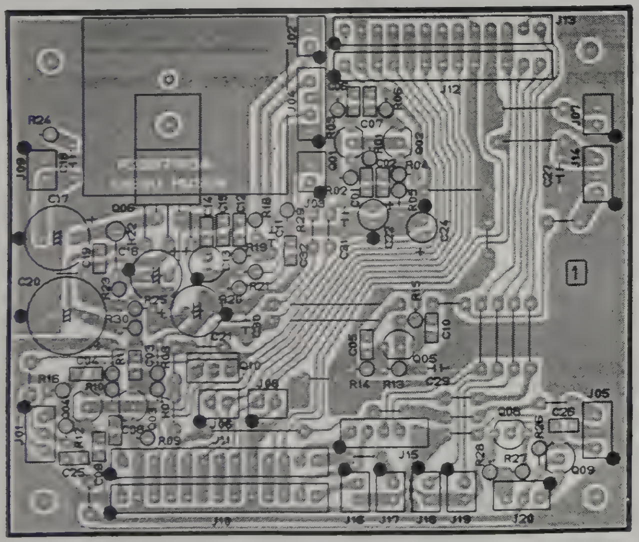
RESISTOR VALUES ARE IN Ω. 1/6W:
CAPACITOR VALUES ARE IN μF.
INDUCTOR VALUES ARE IN HENRIES: UNLESS OTHERWISE NOTED.
(T)CAPACITORS ARE TANTALUM.
(sr)CAPACITORS ARE SEMICONDUCTOR CERAMIC. 25wv.

AF UNIT PARTS LAYOUT/CIRCUIT DIAGRAM

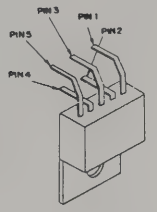
AF UNIT (No. 5×××)



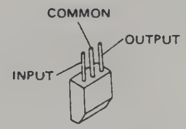
Component side (obverse)



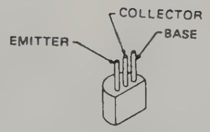
Component side (reverse)



μPC2002H(Q5006)



μPC78L08(Q5010)



2SC458C(Q5008,5009)
2SC460B(Q5001-5005)

AF UNIT VOLTAGE CHART

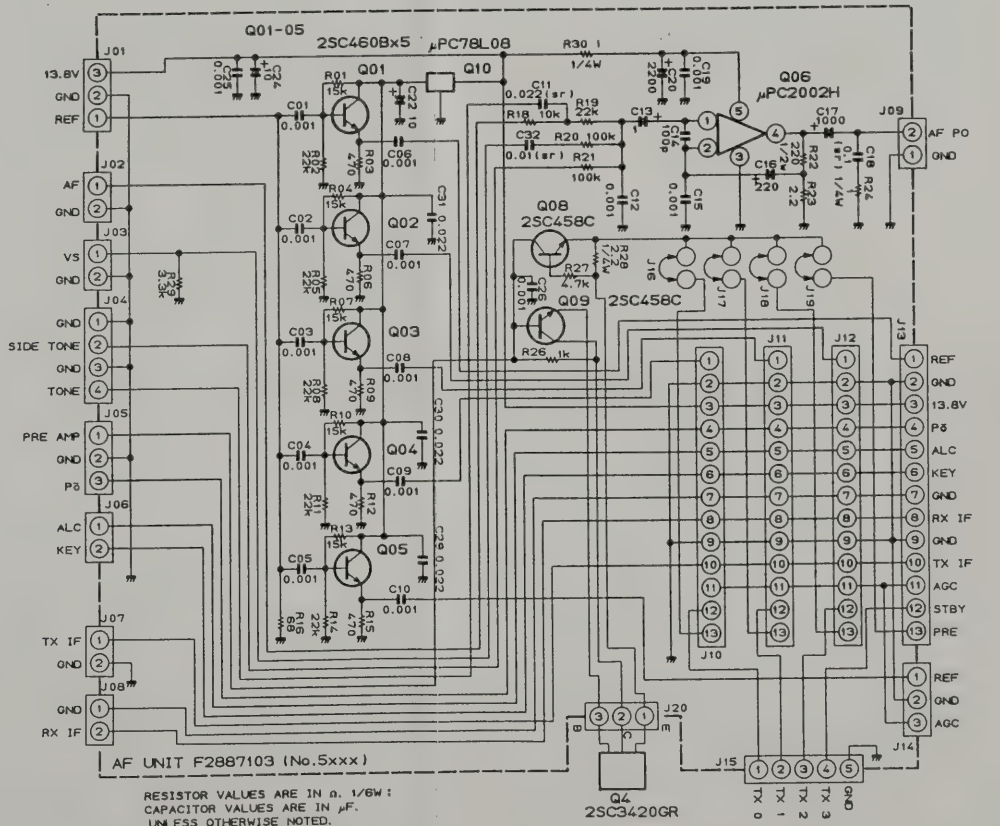
(DC VOLTS)

	E(S)	C(D)	B		REMARKS		E(S)	C(D)	B		REMARKS
			(G₁)	(G₂)					(G₁)	(G₂)	
Q5001	3.4	8.0	4.1			Q5005	3.4	8.0	4.1		
Q5002	3.4	8.0	4.1			Q5008	0.01/12.50	0.01/13.60	0.01/12.50		PRE AMP OFF/ON
Q5003	3.4	8.0	4.1			Q5009	0.01/13.60	13.60	0.01/13.10		PRE AMP OFF/ON
Q5004	3.4	8.0	4.1								

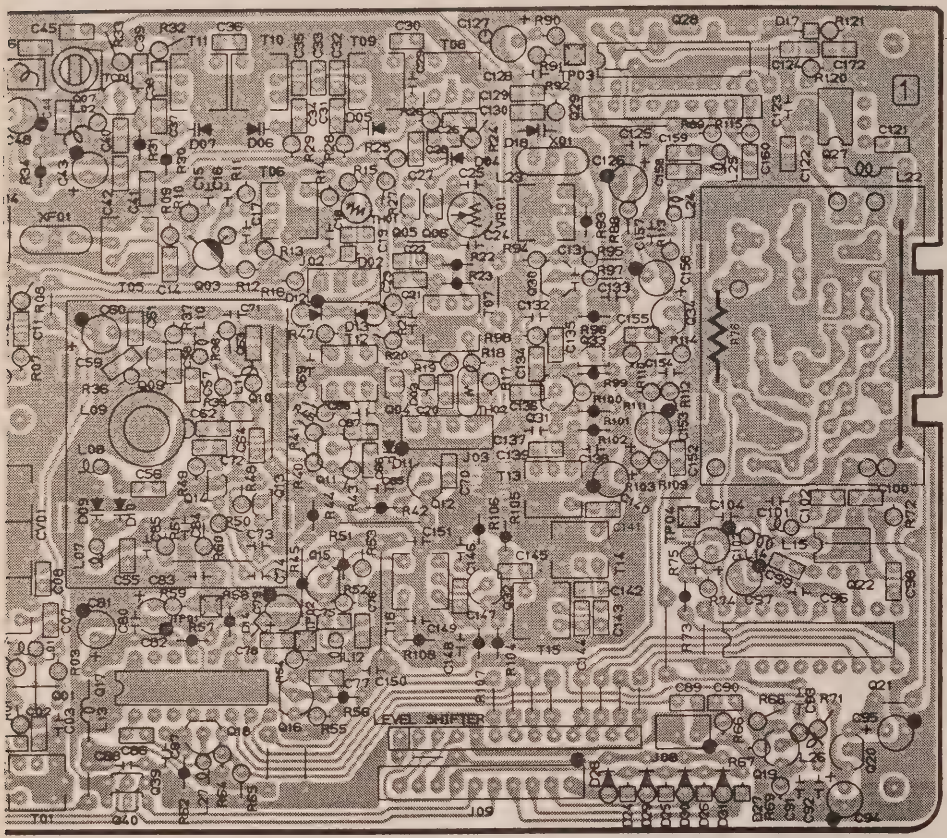
AF UNIT IC VOLTAGE CHART

(DC VOLTS)

	1	2	3	4	5	REMARKS		1(IN)	2(GND)	3(OUT)	4	5	REMARKS
Q5006	0.7	0.7	0	6.4	13.6		Q5C10	13.8	0	8.0			

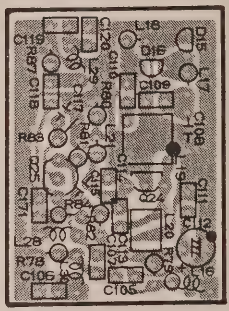


RESISTOR VALUES ARE IN Ω. 1/6W :
CAPACITOR VALUES ARE IN μF.
UNLESS OTHERWISE NOTED.
(sr)CAPACITORS ARE SEMICONDUCTOR CERAMIC. 25wv:

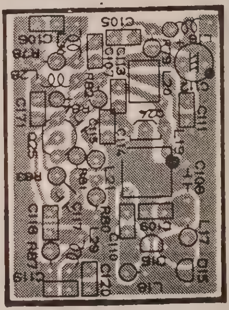


Component side (reverse)

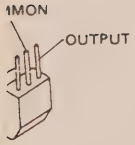
144MHz SUB VCO UNIT
(No. 6×××)



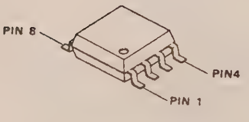
Component side (obverse)



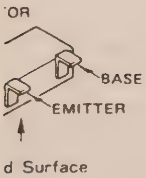
Component side (reverse)



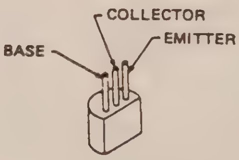
05(Q6020)



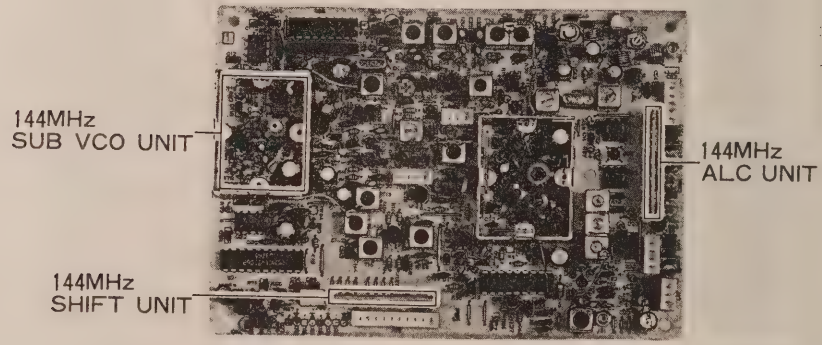
µPC358G(Q9501)



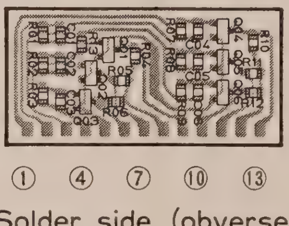
-G) (Q9101-9106)



2SA1528(Q6037,6038)
2SC458C
(Q6012,6018,6019)
2SC460B(Q6030,6034)
2SC535B
(Q6011,6015,6016
6031,6032)
2SC2026(Q6007)
2SC2053(Q6008)

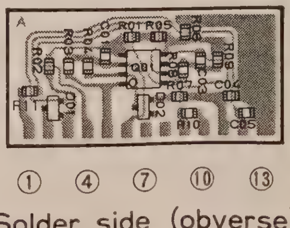


144MHz SHIFT UNIT
(No. 91××)



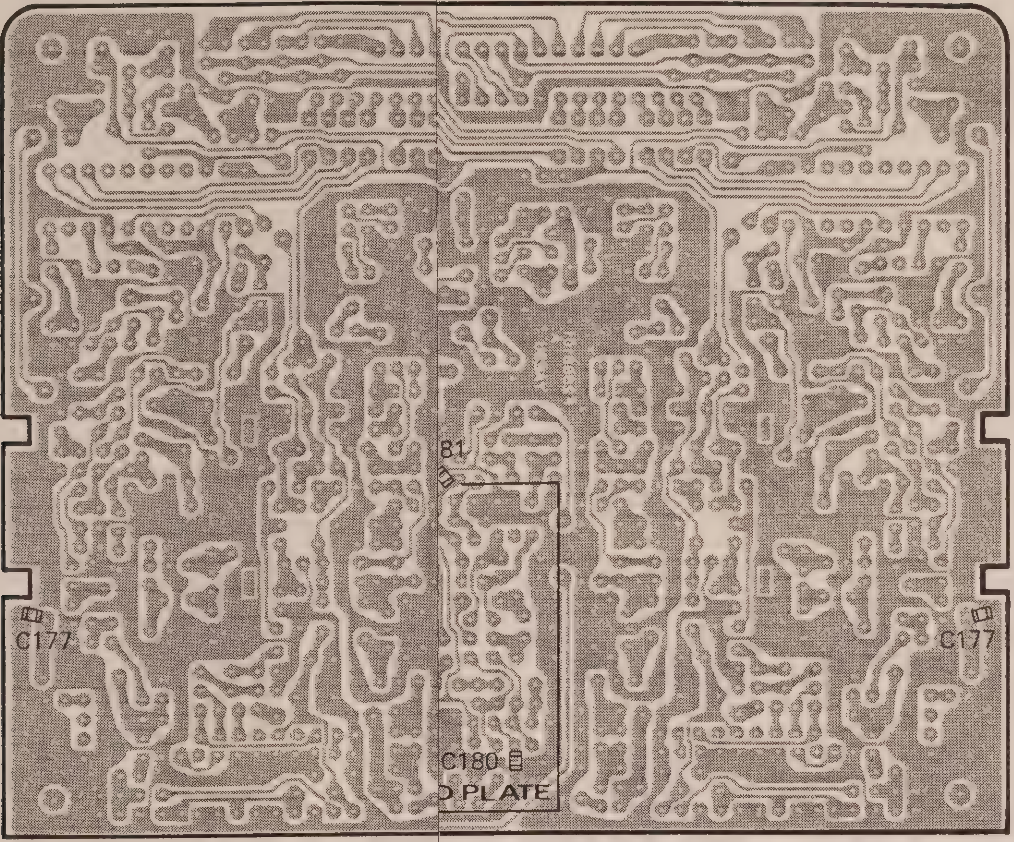
Solder side (obverse)

144MHz ALC UNIT
(No. 95××)



Solder side (obverse)

IIT PARTS LAYOUT



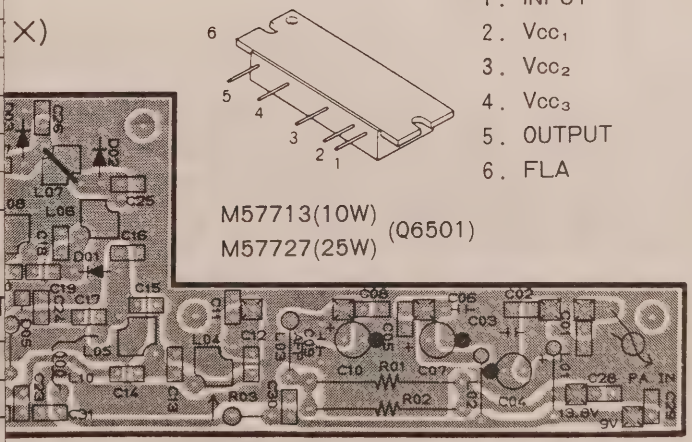
Solder side (reverse)

144MHz MAIN T IC VOLTAGE CHART

(DC VOLTS)

	E(S)	C(D)	B (G_1)	(G_2)	REMAR	10	11	12	13	14	15	16	17	18	19	20	REMARKS
Q6001	1.03	8.70	0.93	2.04	RX												RX
Q6003	0.6	8.4	0.6	4.5	RX	.075	0.07	0.05	—	—	—	—	3.50	0			
Q6004	0/9.0	0/0	0/0.01		RX / TX												
Q6005	1.0	8.6	0		TX	2.00	0.06	0.05	0.06	—	—	—	2.60	—	2.06	4.90	
Q6006	1.0	8.6	0		TX												
Q6007	1.0	8.9	2.5		TX												
Q6008	0	13.5	0.7		TX	0	0	0	0	0	0	0	0.34	0			
Q6009	0.66	8.50	0														
Q6010	0	9.0	0														
Q6011	1.45	8.70	1.65														
Q6012	0	0.07	0.71														
Q6013	3.3	9.0	2.6														
Q6014	0	4.9	0														
Q6015	1.10	5.80	1.73														
Q6016	1.40	5.20	1.14														

X)



1. INPUT
2. Vcc_1
3. Vcc_2
4. Vcc_3
5. OUTPUT
6. FLA

M57713(10W)
M57727(25W) (Q6501)

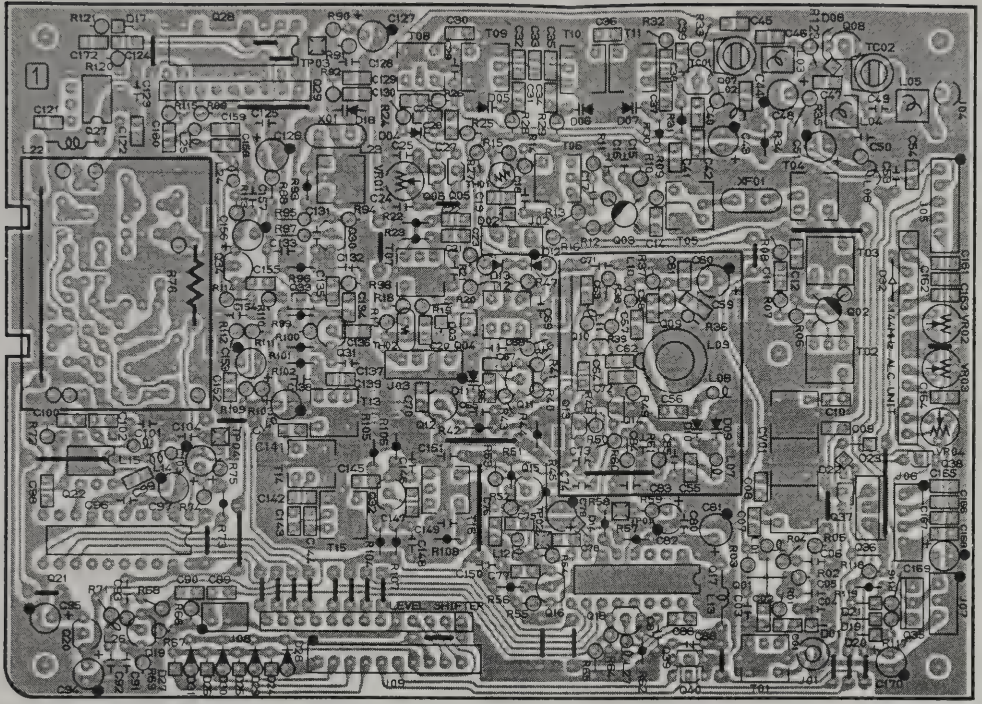
Component side (reverse)

144MHz PA UNIT IC VOLT

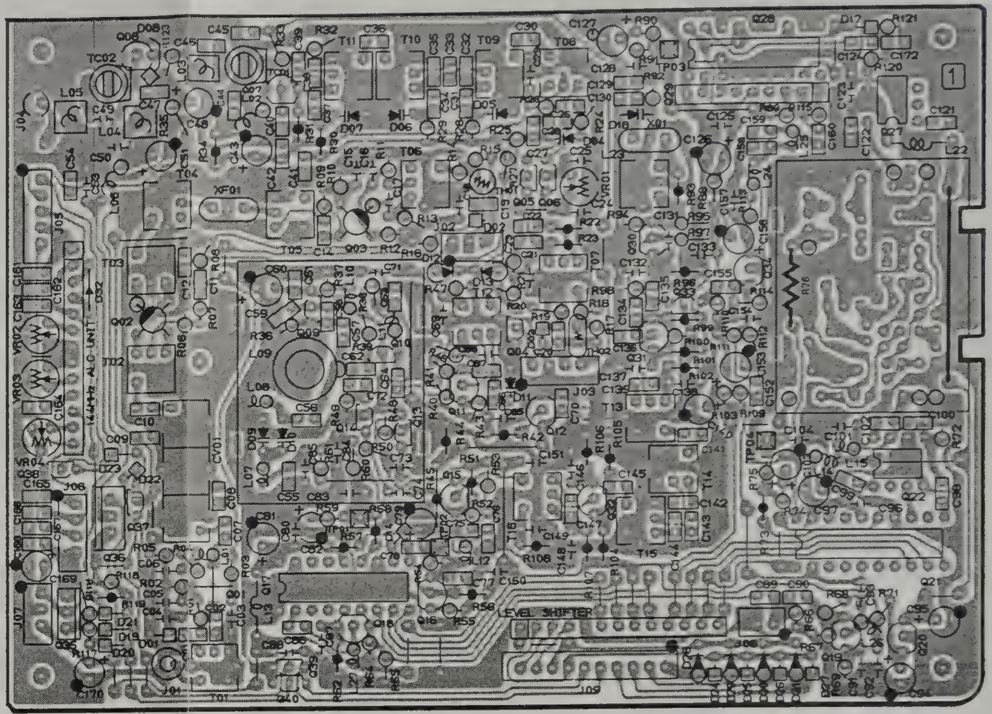
	1	2	3
Q6501	—	13.80	9.00

144MHz MAIN UNIT PARTS LAYOUT

144MHz MAIN UNIT (No. 6×××)

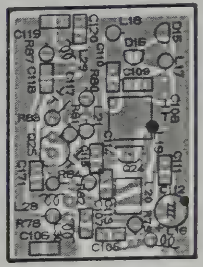


Component side (obverse)

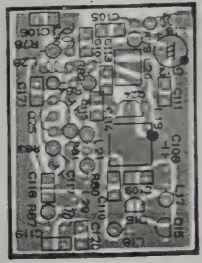


Component side (reverse)

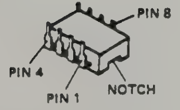
144MHz SUB VCO UNIT
(No. 6×××)



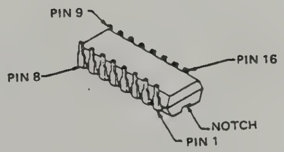
Component side (obverse)



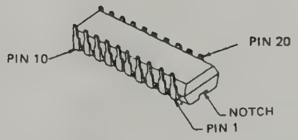
Component side (reverse)



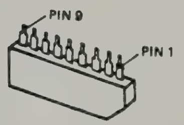
MB504(Q6022)
MB505-16(Q6027)



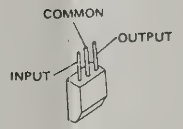
TC9122P(Q6028)
MC145155P(Q6017)



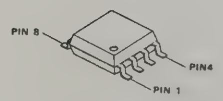
MC145156P(Q6021)



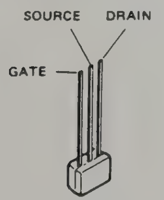
TC5081AP(Q6029)



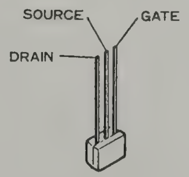
μPC78L05(Q6020)



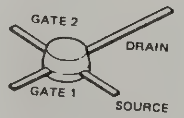
μPC358G(Q9501)



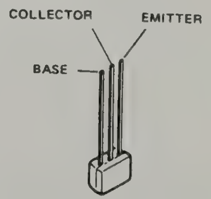
2SK192AGR(Q6009)
2SK241GR
(Q6005,6006,6010
6013,6014,6033)



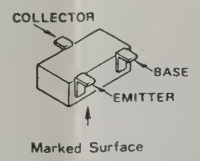
2SK507F(Q6024)



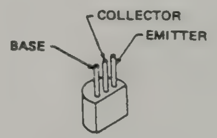
3SK122L(Q6001,6003)



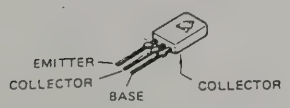
BA1A4P
(Q6004,6039,6040)



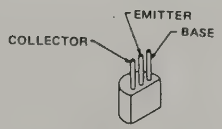
2SC2712GR(LG) (Q9101-9106)



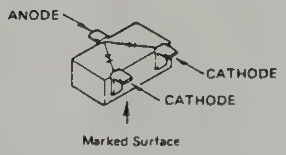
2SA1528(Q6037,6038)
2SC458C
(Q6012,6018,6019)
2SC460B(Q6030,6034)
2SC535B
(Q6011,6015,6016
6031,6032)
2SC2026(Q6007)
2SC2053(Q6008)



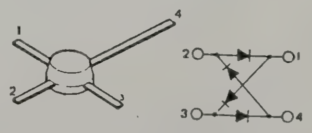
2SB772Q(Q6035,6036)



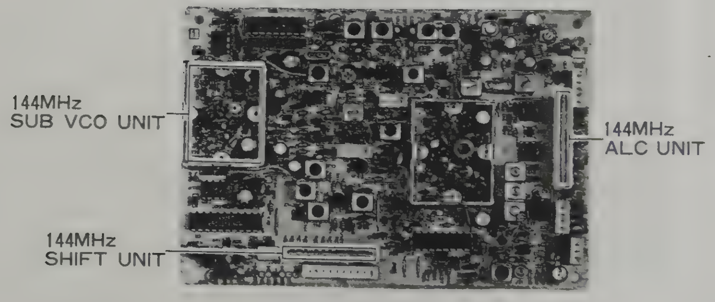
2SC3355(Q6025)



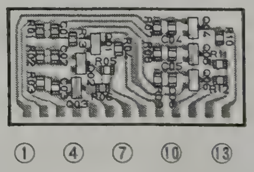
1SS181(A3) (Q9501,9502)



ND487C1-3R(Q6002)

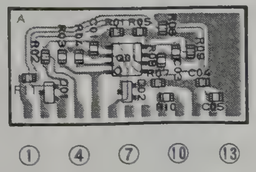


144MHz SHIFT UNIT
(No. 91××)



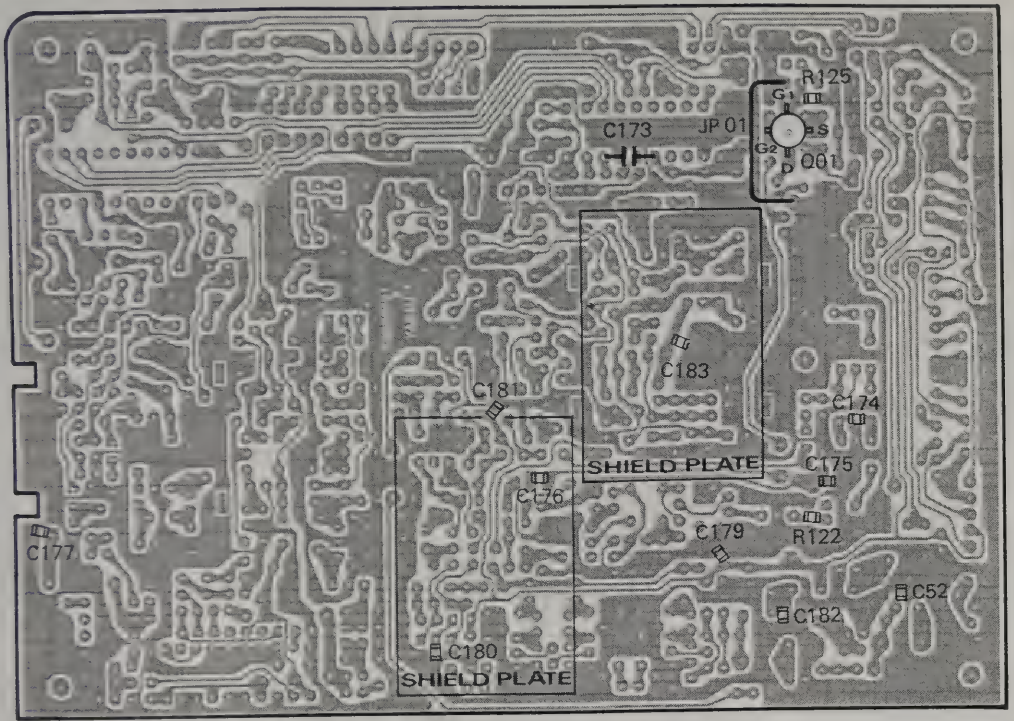
Solder side (obverse)

144MHz ALC UNIT
(No. 95××)

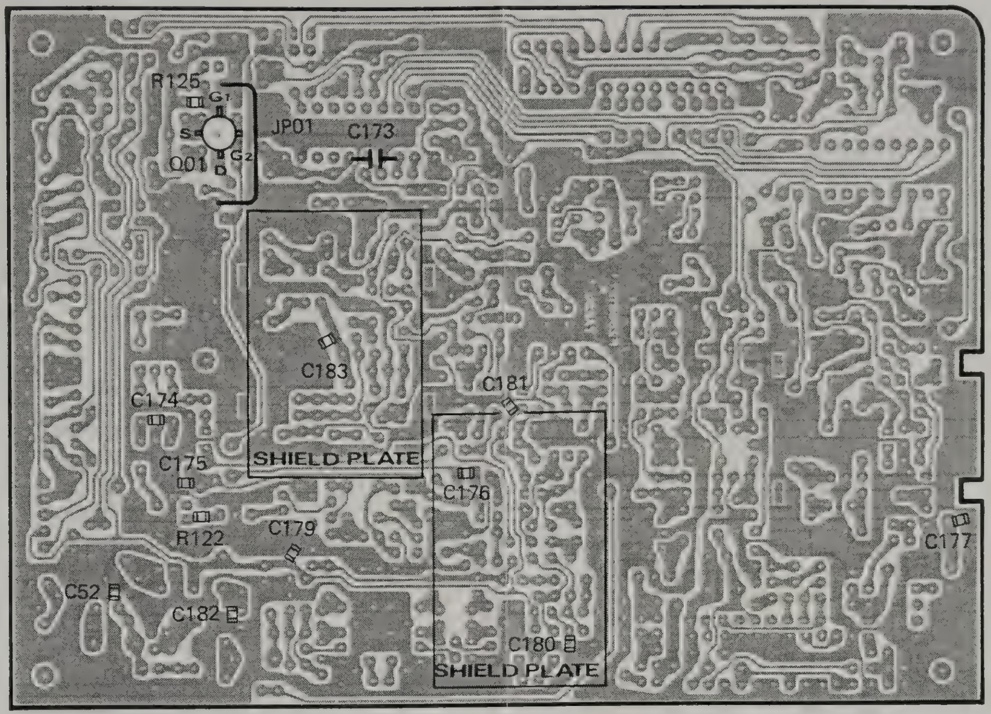


Solder side (obverse)

144MHz MAIN UNIT PARTS LAYOUT



Solder side (obverse)



Solder side (reverse)

144MHz MAIN UNIT VOLTAGE CHART

(DC VOLTS)

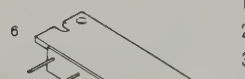
	E(S)	C(D)	B (G$_1$)	B (G$_2$)	REMARKS
Q6001	1.03	8.70	0.93	2.04	RX
Q6003	0.6	8.4	0.6	4.5	RX
Q6004	0/9.0	0/0	0/0.01		RX / TX
Q6005	1.0	8.6	0		TX
Q6006	1.0	8.6	0		TX
Q6007	1.0	8.9	2.5		TX
Q6008	0	13.5	0.7		TX
Q6009	0.66	8.50	0		
Q6010	0	9.0	0		
Q6011	1.45	8.70	1.65		
Q6012	0	0.07	0.71		
Q6013	3.3	9.0	2.6		
Q6014	0	4.9	0		
Q6015	1.10	5.80	1.73		
Q6016	1.40	5.20	1.14		
Q6018	0.2	9.0	2.3		
Q6019	1.5	8.8	2.1		
Q6024	1.3	8.9	0		
Q6025	1.3	7.8	2.0		
Q6030	2.3	7.9	2.9		
Q6031	0.9	7.8	1.5		
Q6032	8.70	1.96	1.20		
Q6033	0	4.1	0		
Q6034	0.9	4.9	1.5		
Q6035	13.7	13.8	12.9		
Q6036	9.00	0/9.00	9.05/8.32		RX / TX
Q6037	9.00	9.00/0	0.76/9.00		RX / TX
Q6038	0/12.60	0/12.60	0.01/0.82		PRE AMP OFF/ON
Q6039	0	0.13/8.80	4.90/0		RX / TX
Q6040	0	8.85/0.22	0/4.90		RX / TX

144MHz MAIN UNIT IC VOLTAGE CHART

(DC VOLTS)

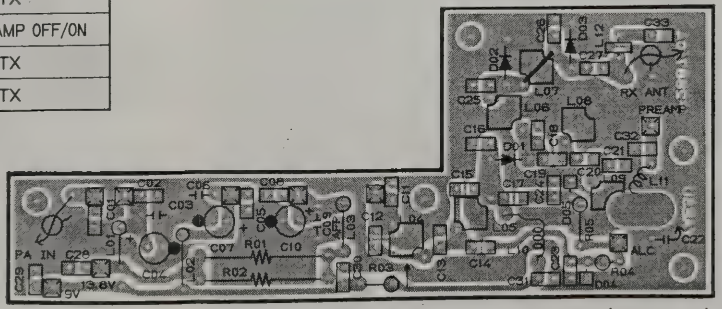
	1(IN)	2(GND	3(OUT)	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	REMARKS
Q6002	0		0																		RX
Q6017	8.80	0	—	—	8.80	2.70	0	8.80	0.07	0.075	0.07	0.05	—	—	—	—	3.50	0			
Q6020	8.8	0	5.0																		
Q6021	0	4.90	—	—	4.90	0.97	0	4.30	—	2.00	0.06	0.05	0.06	—	—	—	2.60	—	2.06	4.90	
Q6022	2.60	5.00	—	2.96	0	4.30	—	2.60													
Q6027	2.5	5.0	5.0	2.7	0	2.5															
Q6028	7.50	3.10	0	7.50	0	0	7.50	0	0	0	0	0	0	0	0	0	0.34	0			
Q6029	3.40	3.30	2.80	—	7.50	—	3.40	0.34	0												

144MHz PA UNIT (No. 65××)

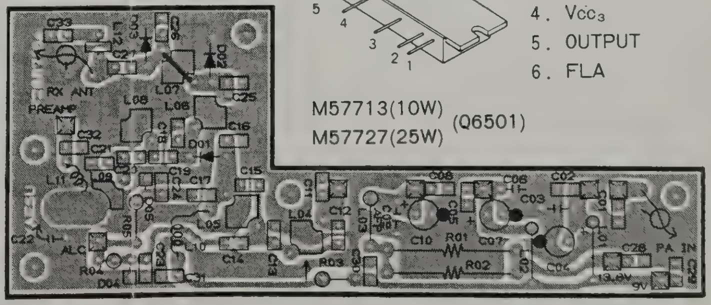


1. INPUT
2. Vcc$_1$
3. Vcc$_2$
4. Vcc$_3$
5. OUTPUT
6. FLA

M57713(10W)
M57727(25W) (Q6501)



Component side (obverse)

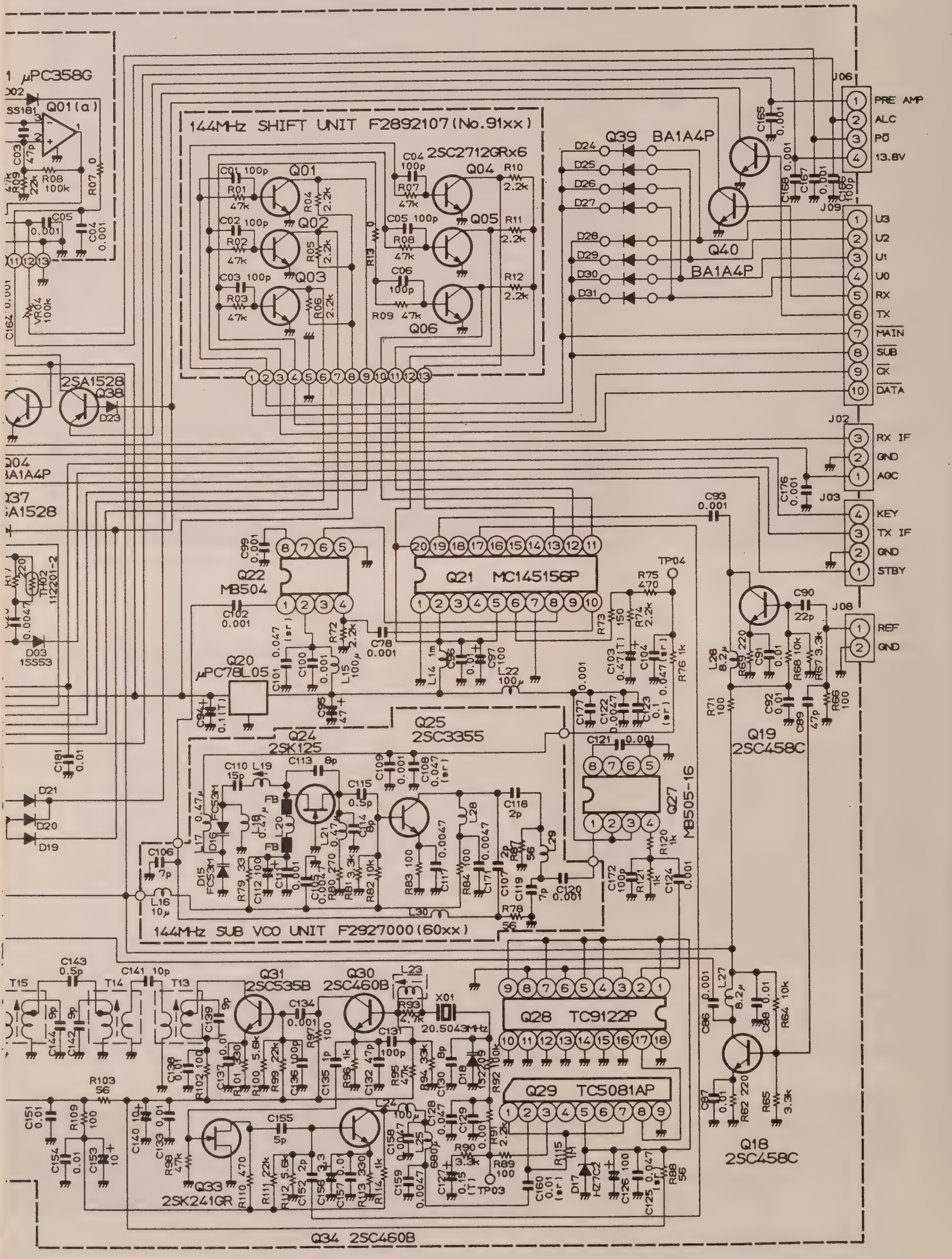


Component side (reverse)

144MHz PA UNIT IC VOLTAGE CHART

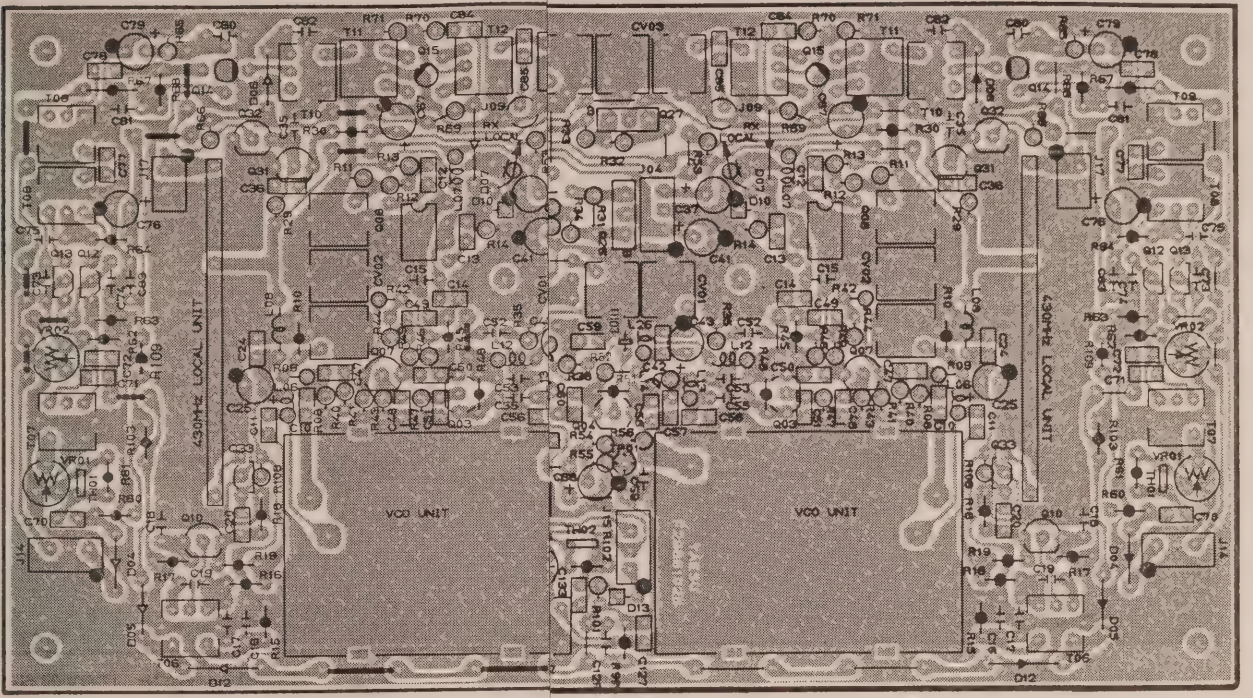
(DC VOLTS)

	1	2	3	4	5	REMARKS
Q6501	—	13.80	9.00	13.34	—	@ 10W output

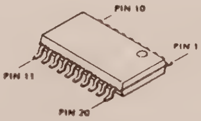

144MHz SHIFT UNIT F2892107(No.91xx)
2SC2712GRx6
Q01
Q02
Q03
Q04
Q05
Q06
C01 100p
C02 100p
C03 100p
C04 100p
C05 100p
C06 100p
R01 47k
R02 47k
R03 47k
R04 2.2k
R05 2.2k
R06 2.2k
R07 47k
R08 47k
R09 47k
R10 2.2k
R11 2.2k
R12 2.2k
R13 0
Q39 BA1A4P
Q40 BA1A4P
D24
D25
D26
D27
D28
D29
D30
D31
C165 0.001
C167 0.001
C168 0.001
C166 100p
J06
PRE AMP
ALC
PO
13.8V
J09
U3
U2
U1
U0
RX
TX
MAIN
SUB
CK
DATA
J02
RX IF
GND
AGC
C176 0.001
J03
KEY
TX IF
GND
STBY
C93 0.001
J08
REF
GND
C90 22p
μPC358G
Q01(a)
D02
1SS181
C03 47p
R08 100k
R07 0
C05 0.001
C04 0.001
C164 0.001
VR04 100k
2SA1528
Q38
D23
Q04
BA1A4P
Q37
2SA1528
R17 220
TH02 112201-2
C 0.0047
D03 1SS53
C181 0.01
D21
D20
D19
Q22 MB504
C99 0.001
C102 0.001
Q21 MC145156P
TP04
R75 470
R73 150
R74 2.2k
R76 1k
C103 0.47(T)
C104 0.047(sr)
C101 0.047(sr)
C100 0.001
R72 2.2k
L15 100μ
C78 0.001
L14 1m
C96 0.01
C97 100
L22 100μ
Q20 μPC78L05
C94 0.1(T)
C95 47
C177 0.001
C122 0.0047
C123 0.1 (sr)
Q24 2SK125
Q25 2SC3355
C121 0.001
Q27 MB505-16
C110 15p
L19
C113 8p
C109 0.001
C108 0.047 (sr)
C115 0.5p
L28
C118 2p
L17 0.47μ
D16 FC53M
L18 0.47μ
FB
L20
L21 0.47μ
C114 8p
C106 7p
D15 FC53M
R79 33
C112 100
C111 0.001
C116 0.0047
R80 270
R81 3.3k
R82 10k
R83 100
C117 0.0047
R84 100
C171 0.0047
C107 2p
R87 56
L29
C119 7p
C120 0.001
R120 1k
C172 100p
R121 1k
C124 0.001
L16 10μ
L30
R78 56
144MHz SUB VCO UNIT F2927000(60xx)
L26 8.2μ
R69 220
C91 0.01
R68 10k
R67 3.3k
R71 100
C92 0.01
C89 47p
R66 100
Q19 2SC458C
C143 0.5p
C141 10p
T15
T14
T13
C144 9p
C142 9p
C139 9p
Q31 2SC535B
Q30 2SC460B
C134 0.001
L23
R93 4.7k
X01 20.5043MHz
C131 100p
R97 100
C138 0.01
C137 0.01
R102 100
R101 330
R100 5.6k
R99 22k
C136 100p
C135 1p
R96 1k
C132 47p
R95 47k
R94 33k
C130 8p
D18 1S2209
R92 100k
Q28 TC9122P
Q29 TC5081AP
C86 0.001
L27 8.2μ
C88 0.01
R64 10k
C87 0.01
R62 220
R65 3.3k
Q18 2SC458C
R103 56
C151 0.01
R109 100
C154 0.01
C153 10
C140 10
C133 0.01
C155 5p
R98 47k
Q33 2SK241GR
R110 470
R111 22k
R112 5.6k
C152 2p
C156 3.3
C157 0.01
R113 330
R114 1k
L24 100μ
C158 0.01
L25 680μ
C128 0.047
C129 0.01
C159 0.0047
C127 0.15(T)
R90 3.3k
R91 2.2k
R89 100
TP03
C160 0.01 (sr)
R115
D17 HZ7C2
C126 100
C125 0.047 (sr)
R88 56
Q34 2SC460B

IT PARTS LAYOUT

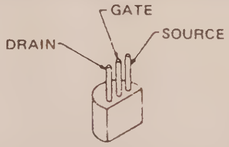
430MHz RF UNIT (No. 7XXX)



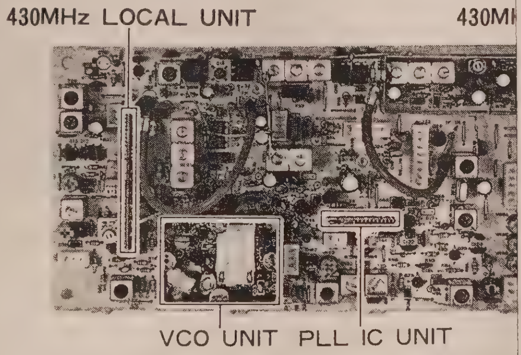
Component side (reverse)

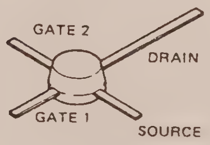


JLC1007(Q7601)

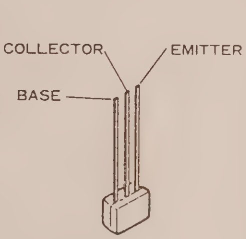


2SK125(Q7401)



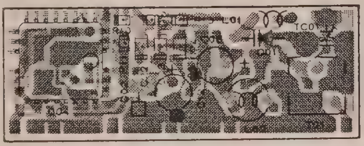


3SK81(Q7023)
3SK122L(Q7014,7022)

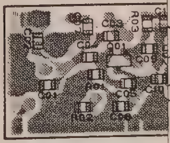


BA1A4P
(Q7024,7025,7030
7034)

430MHz LOCAL UNIT (No.



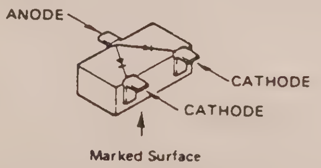
Mixed component side (obverse)



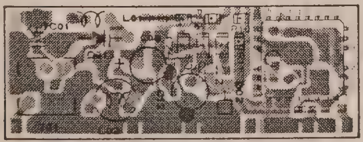
Chip only s

rface

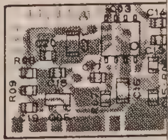
(Q7705)



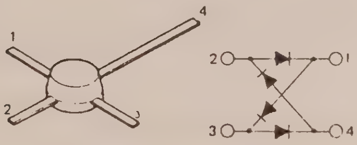
1SS181(A3) (Q9601,9602)



Mixed component side (reverse)



Chip only s

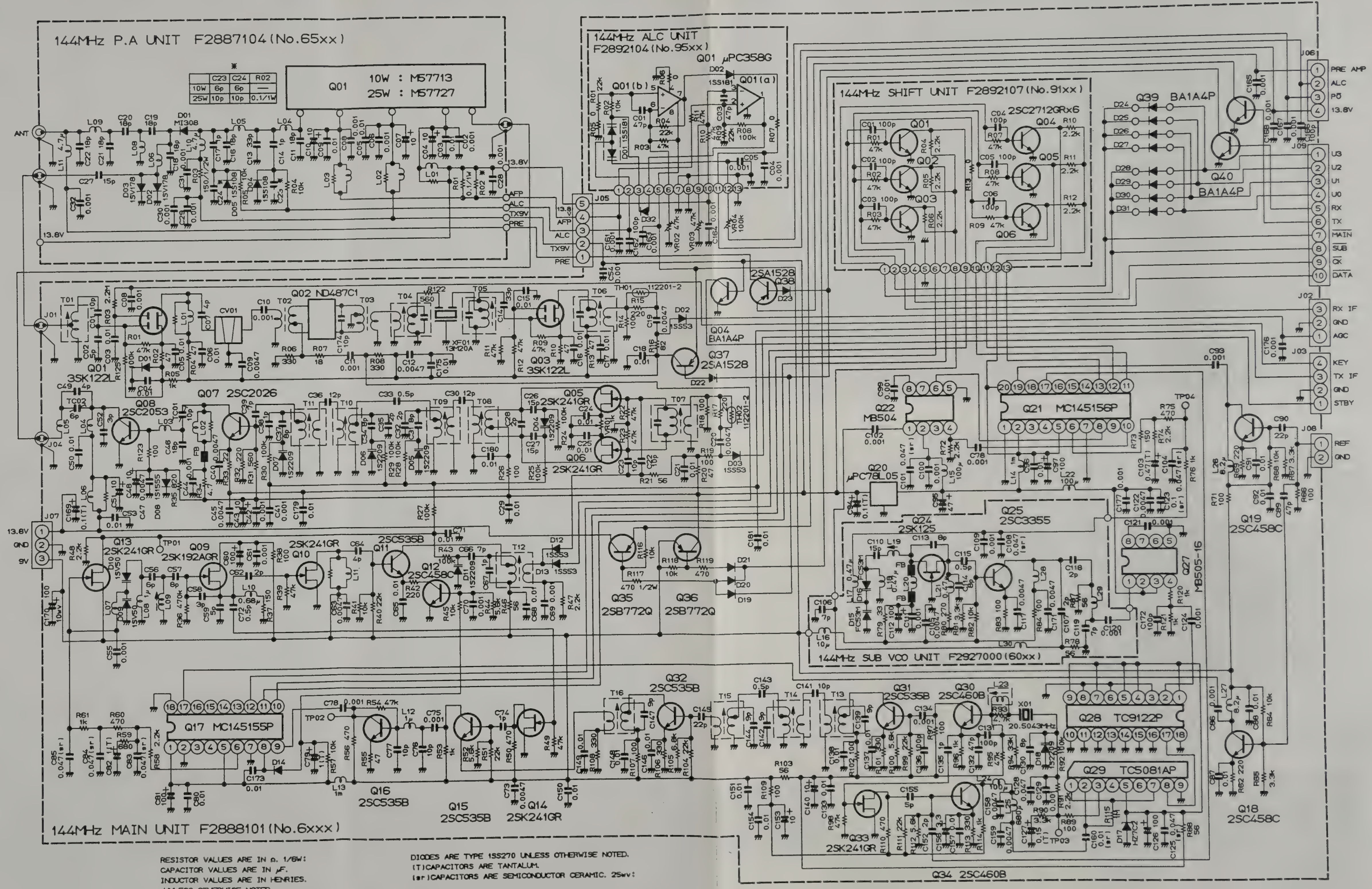


ND487C2-3R(Q7015)

018)

007)

144MHz MAIN UNIT CIRCUIT DIAGRAM

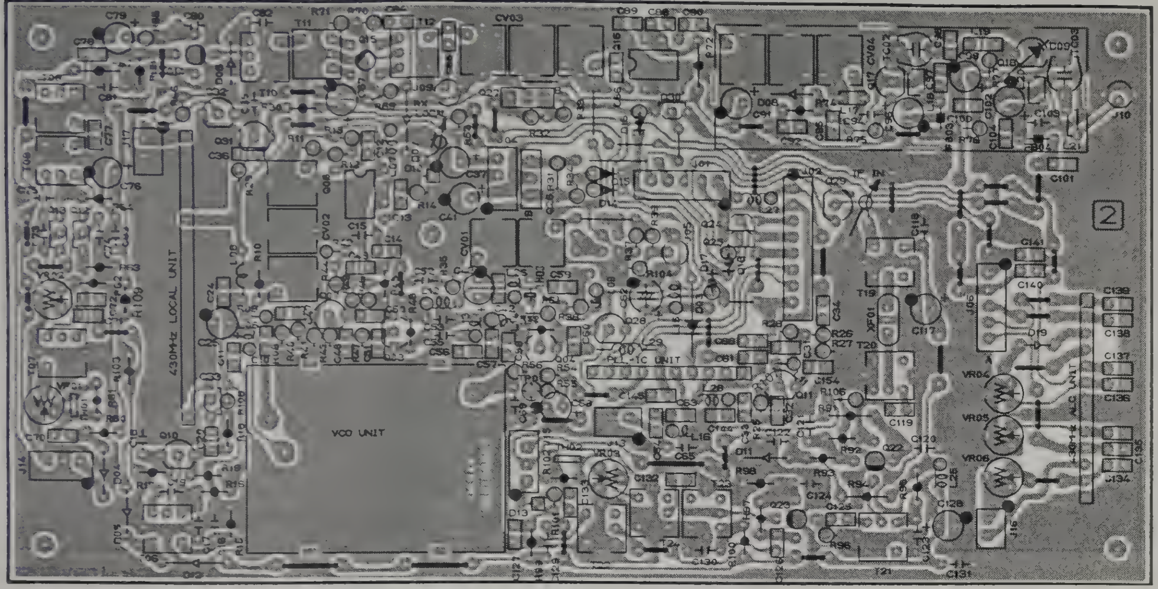


RESISTOR VALUES ARE IN Ω, 1/6W;
CAPACITOR VALUES ARE IN μF,
INDUCTOR VALUES ARE IN HENRIES.
UNLESS OTHERWISE NOTED.

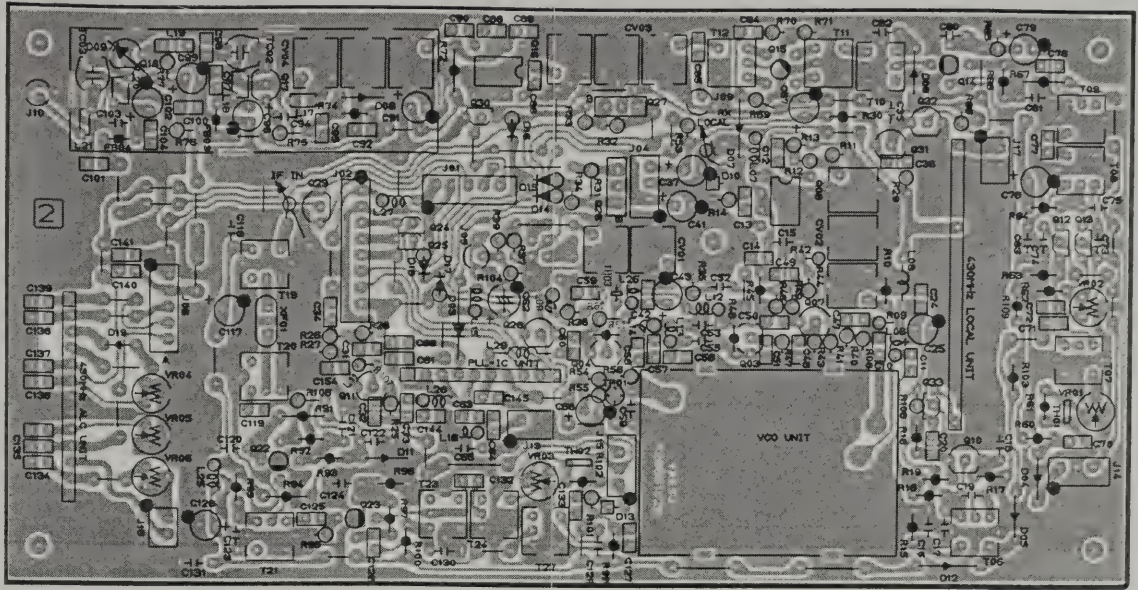
DIODES ARE TYPE 1SS270 UNLESS OTHERWISE NOTED.
(T) CAPACITORS ARE TANTALUM.
(sr) CAPACITORS ARE SEMICONDUCTOR CERAMIC. 25wv:

430MHz RF UNIT PARTS LAYOUT

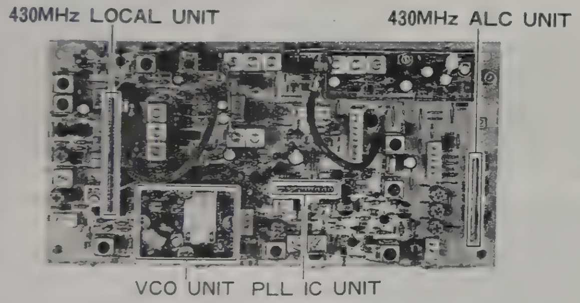
430MHz RF UNIT (No. 7XXX)



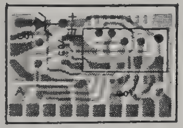
Component side (obverse)



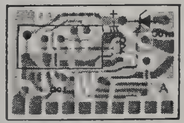
Component side (reverse)



PLL IC UNIT (No. 76XX)

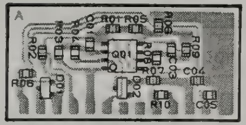


Mixed component side (obverse)



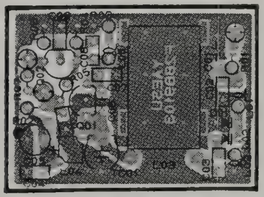
Mixed component side (reverse)

430MHz ALC UNIT (No. 96XX)

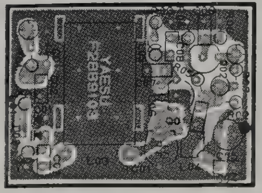


Solder side (obverse)

VCO UNIT (No. 74XX)

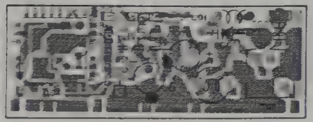


Component side (obverse)

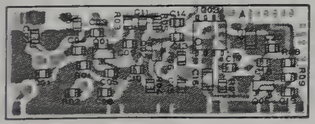


Component side (reverse)

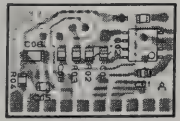
430MHz LOCAL UNIT (No. 77XX)



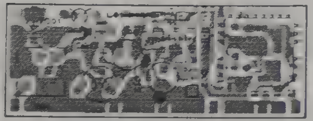
Mixed component side (obverse)



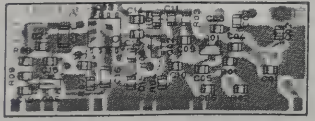
Chip only side (obverse)



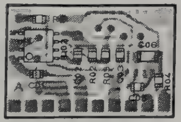
Chip only side (obverse)



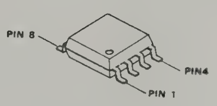
Mixed component side (reverse)



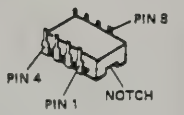
Chip only side (reverse)



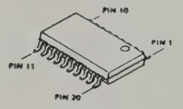
Chip only side (reverse)



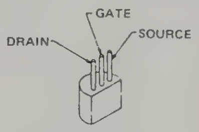
μPC358G(Q9601)
MB503(Q7602,7703)



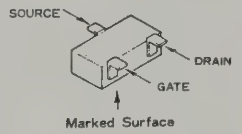
μPC1656C(Q7008,7016)



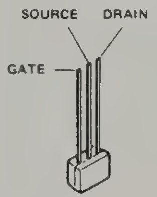
JLC1007(Q7601)



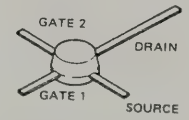
2SK125(Q7401)



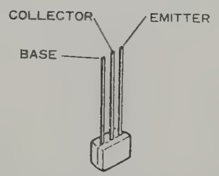
2SK210GR(YG) (Q7701)
2SK302GR(TG) (Q7702)



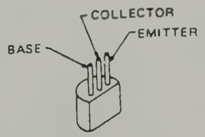
2SK241GR
(Q7012,7013,7033)



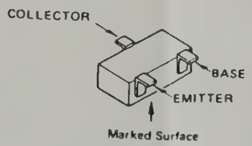
3SK81(Q7023)
3SK122L(Q7014,7022)



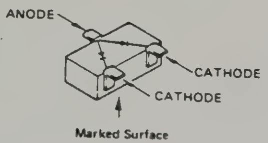
BA1A4P
(Q7024,7025,7030
7034)



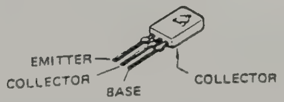
2SA1528(Q7028,7029)
2SC458C
(Q7011,7031,7032)
2SC460B(Q7010)



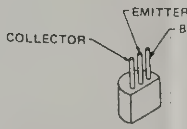
2SC2712GR(LG) (Q7705)



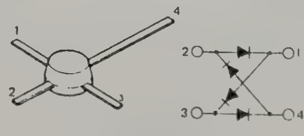
1SS181(A3) (Q9601,9602)



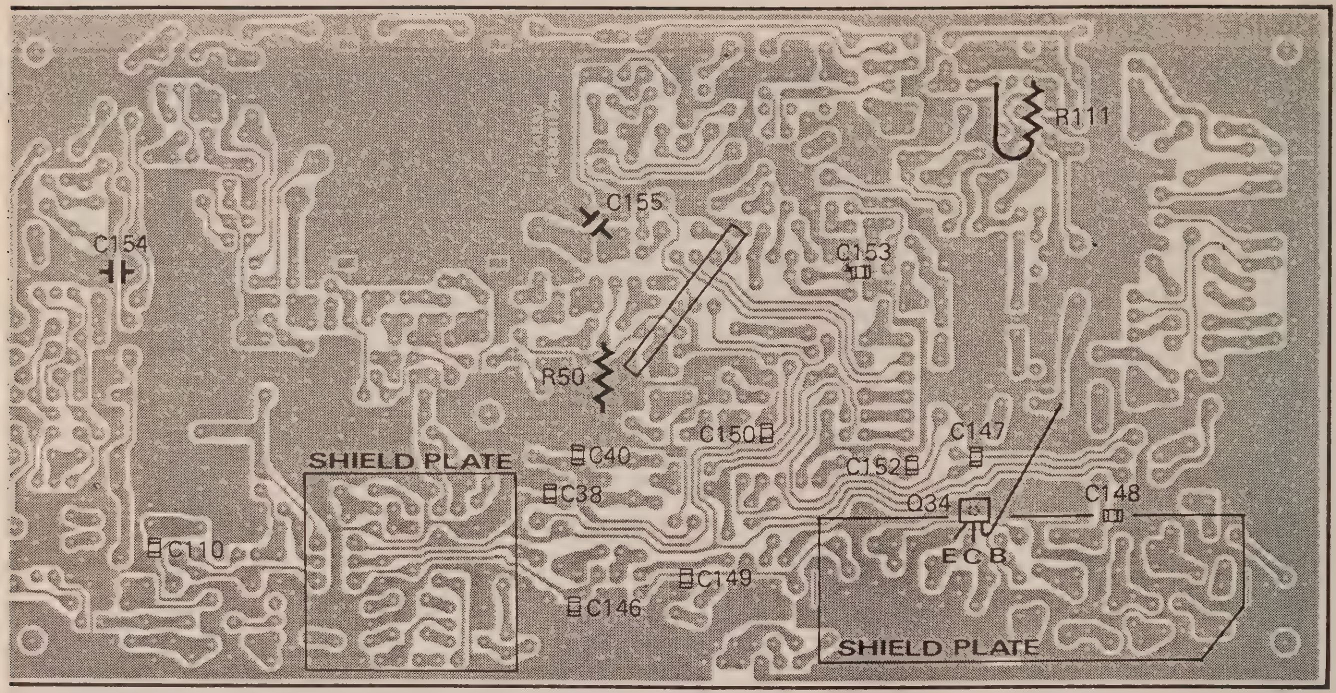
2SB772Q(Q7026,7027)



2SC2407(1) (Q7018)
2SC3355
(Q7003,7004,7007
7017,7402)

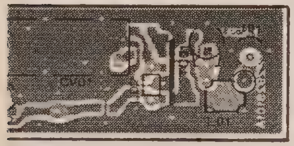


ND487C2-3R(Q7015)

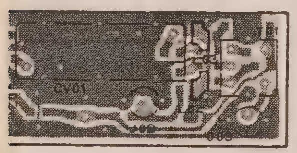


Solder side (reverse)

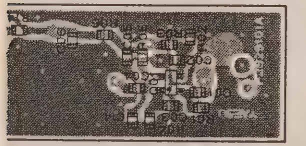
FRONTEND UNIT
(No. 78××)



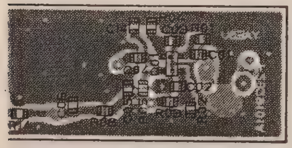
nent side (obverse)



nent side (reverse)

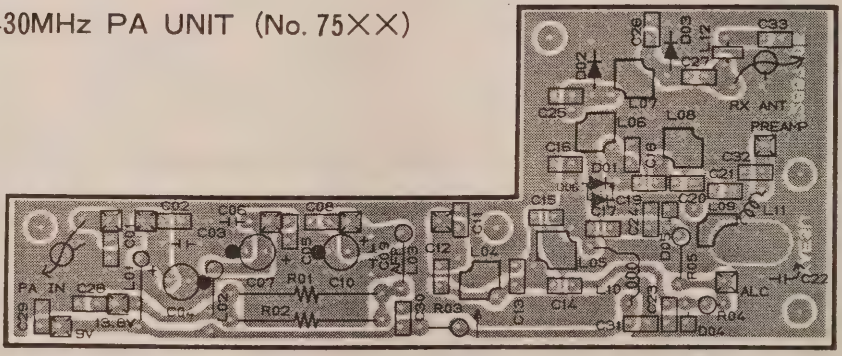


Chip side (obverse)

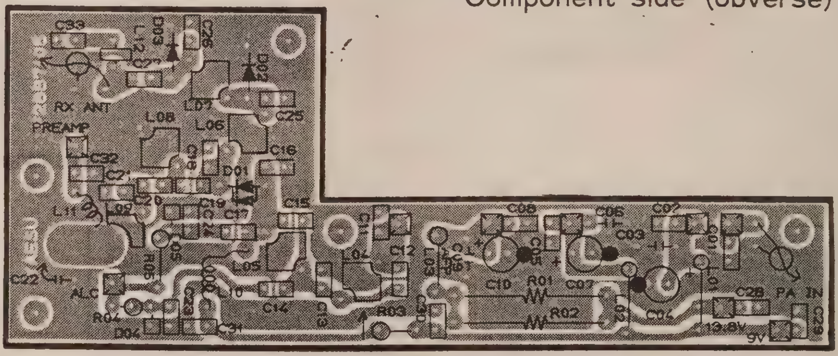


Chip side (reverse)

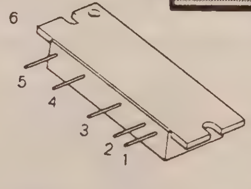
430MHz PA UNIT (No. 75××)



Component side (obverse)



Component side (reverse)



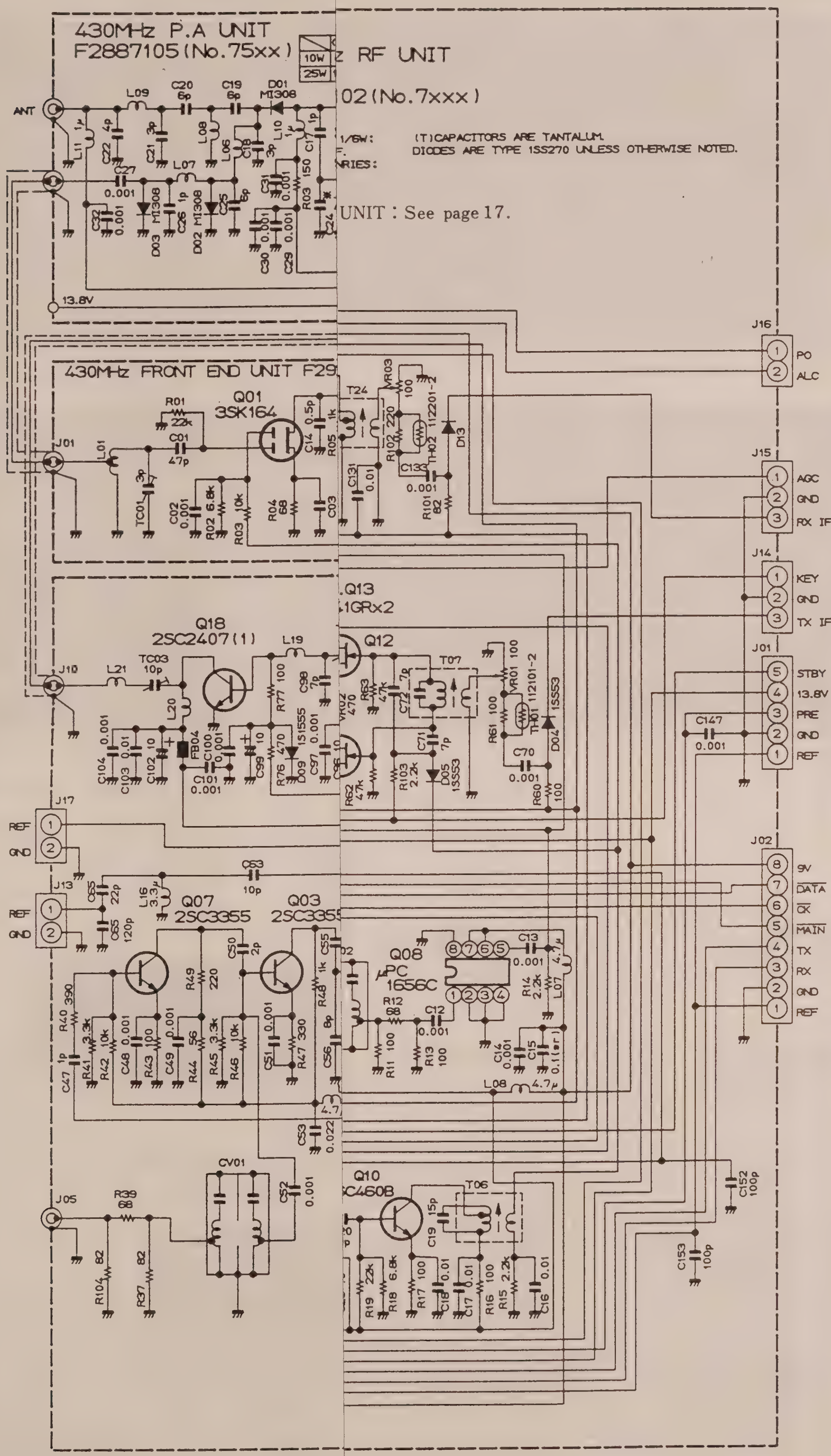
1. INPUT 2. Vcc_1 3. Vcc_2
4. Vcc_3 5. OUTPUT 6. FLA
M57716(10W)
M57745(25W) (Q7501)

430MHz PA UNIT IC VOLTAGE CHART

(DC VOLTS)

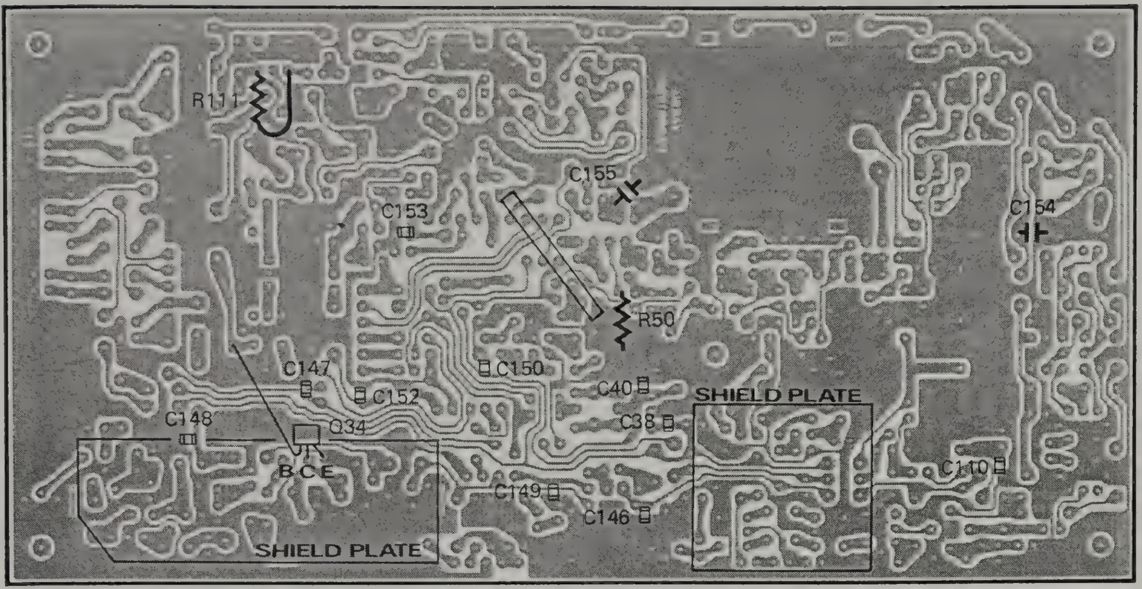
	1	2	3	4	5	REMARKS
Q7501	—	9.0	13.8	13.3	—	@ 10W output

CIRCUIT DIAGRAM

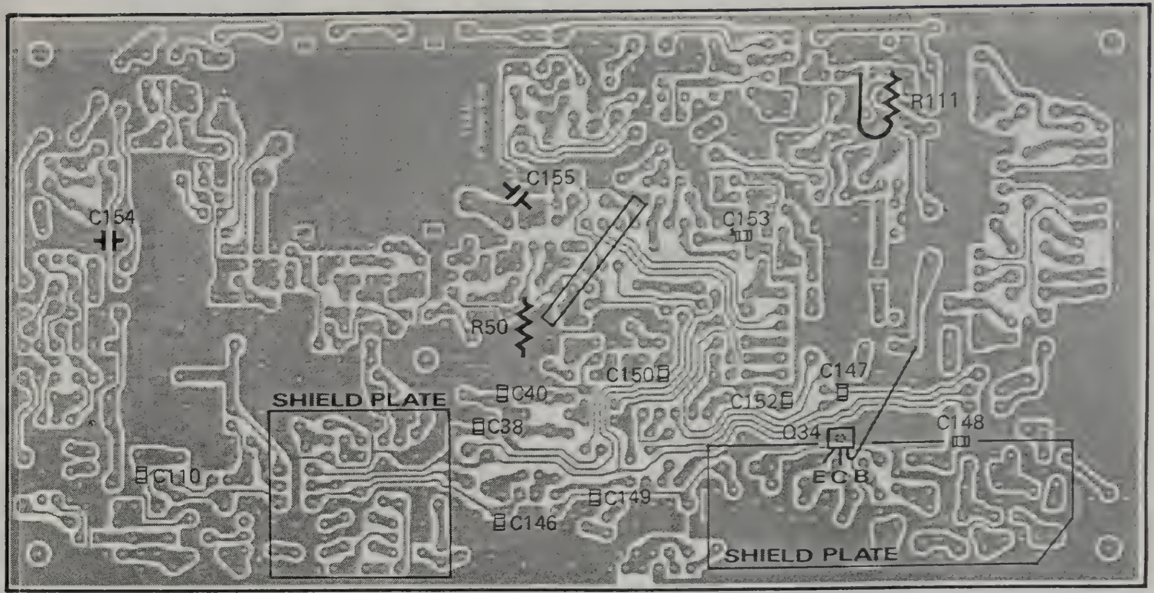


UNIT : See page 17.

430MHz RF UNIT PARTS LAYOUT



Solder side (obverse)



Solder side (reverse)

430MHz RF UNIT VOLTAGE CHART

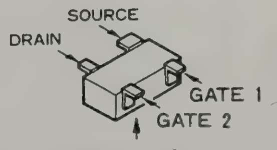
(DC VOLTS)

	E(S)	C(D)	B (G_1)	B (G_2)	REMARKS
Q7003	1.50	4.40	2.15		
Q7004	0.5	5.6	1.3		
Q7007	1.27	5.53	2.02		
Q7010	0.9	8.1	1.6		
Q7011	1.20	5.90	1.85		
Q7012	0.80	8.75	0	0.80	
Q7013	0.80	8.75	0	0.80	
Q7014	2.65	8.20	2.70	5.20	
Q7017	0	9.00	0.75		
Q7018	0	13.20	0.65		
Q7022	1.03	8.57	0.92	2.03	
Q7023	0.70	8.70	0	0.89	
Q7024	0	0.15/8.75	4.90/0		RX / TX
Q7025	0	8.80/0.35	0/4.85		RX / TX
Q7026	13.8	13.8/13.6	12.8/12.7		RX / TX
Q7027	9.0	0/9.0	9.0/8.3		RX / TX
Q7028	9.0	9.0/0	0.8/9.0		RX / TX
Q7029	0/12.60	0/12.60	0.01/0.82		PRE AMP OFF/ON
Q7030	0	0.25/0.03	0/9.00		RX / TX
Q7031	0	0.037	0.65		
Q7032	0	0	0.037		
Q7033	0	7.3	0		
Q7034	0/0.79	0	8.95/0		RX / TX

430MHz RF UNIT IC VOLTAGE CHART

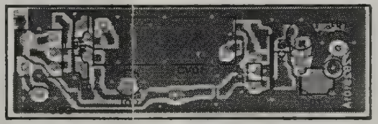
(DC VOLTS)

	1(IN)	2(OUT)	3	4	5	6	7	8	REMARKS
Q7008	0.97	0	0	0	4.80	9.00	9.00	0	
Q7015	0	0							
Q7016	0.98	0	0	0	4.78	8.80	8.80	0	

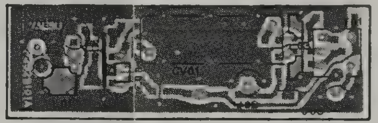


3SK164(F0) (Q7801,7802)

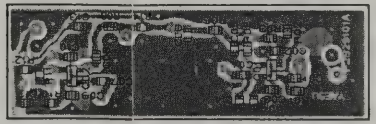
430MHz FRONTEND UNIT (No. 78××)



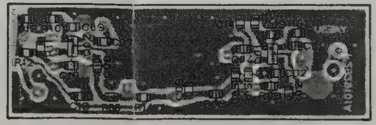
Component side (obverse)



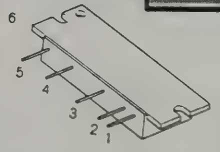
Component side (reverse)



Chip side (obverse)

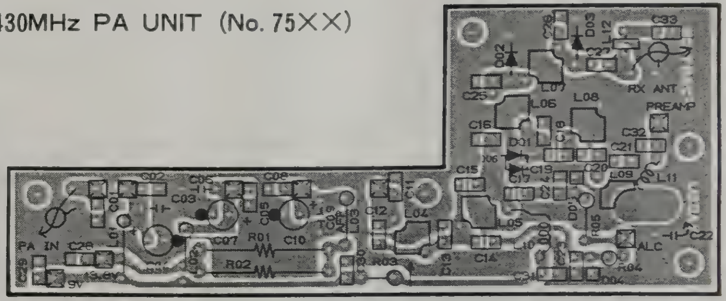


Chip side (reverse)

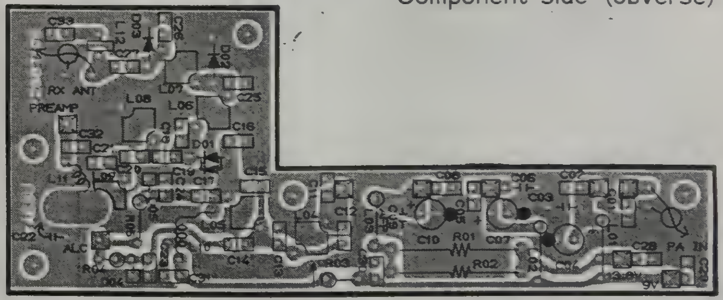


1. INPUT 2. V_{CC_1} 3. V_{CC_2}
4. V_{CC_3} 5. OUTPUT 6. FLA
M57716(10W) (Q7501)
M57745(25W)

430MHz PA UNIT (No. 75××)



Component side (obverse)



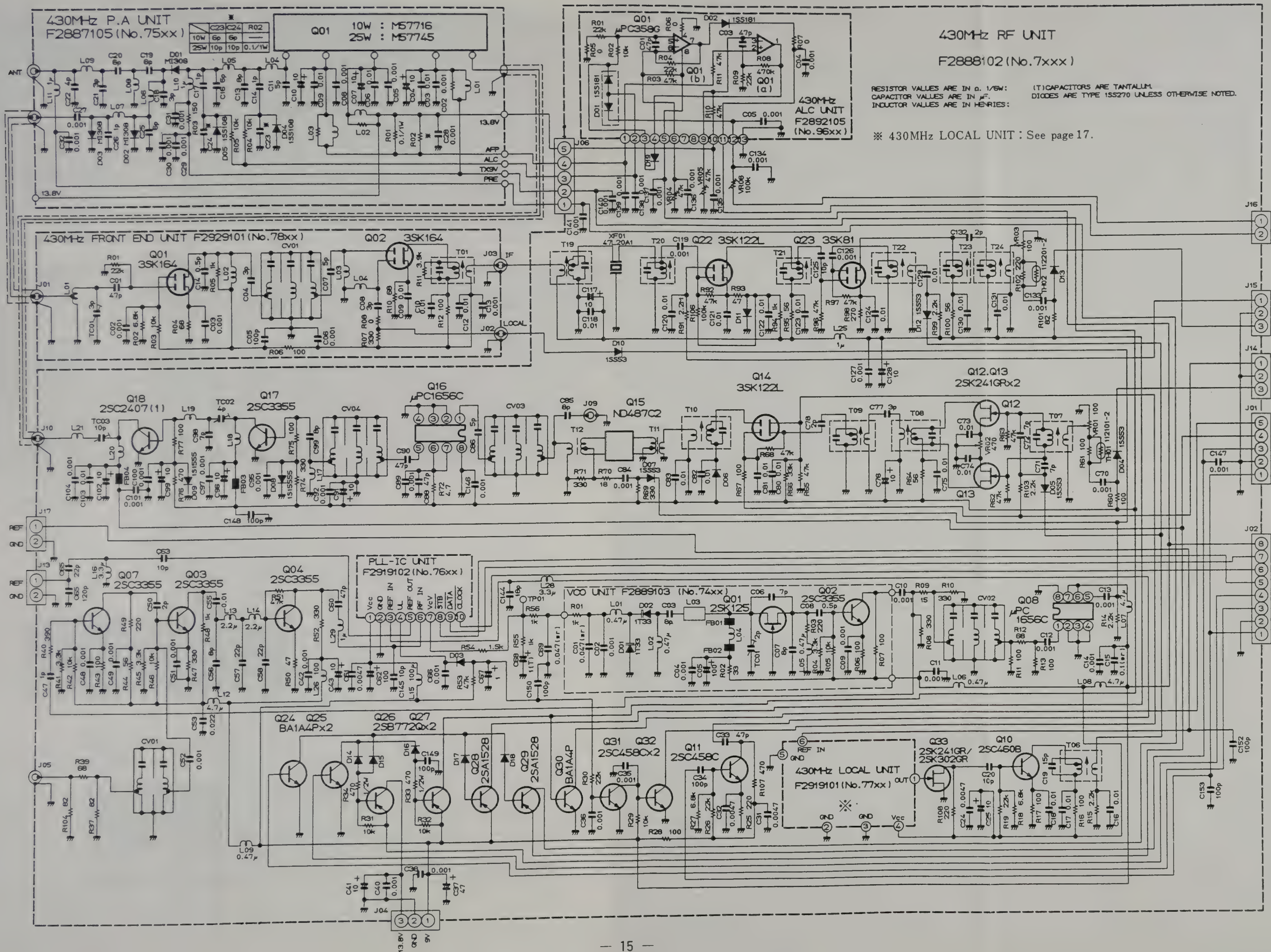
Component side (reverse)

430MHz PA UNIT IC VOLTAGE CHART

(DC VOLTS)

	1	2	3	4	5	REMARKS
Q7501	—	9.0	13.8	13.3	—	@ 10W output

430MHz RF UNIT CIRCUIT DIAGRAM



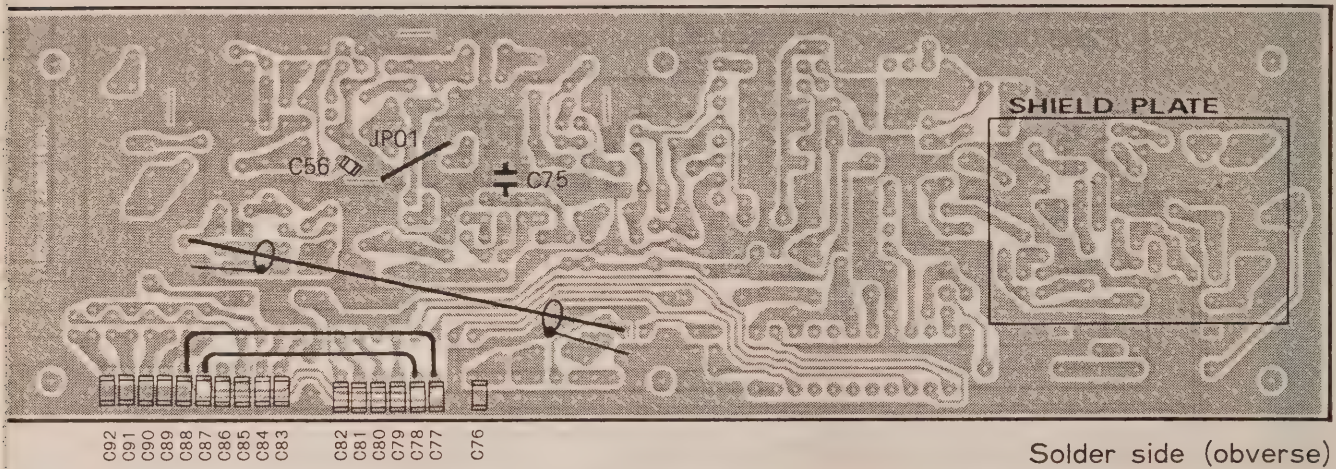
430MHz RF UNIT

F2888102 (No.7xxx)

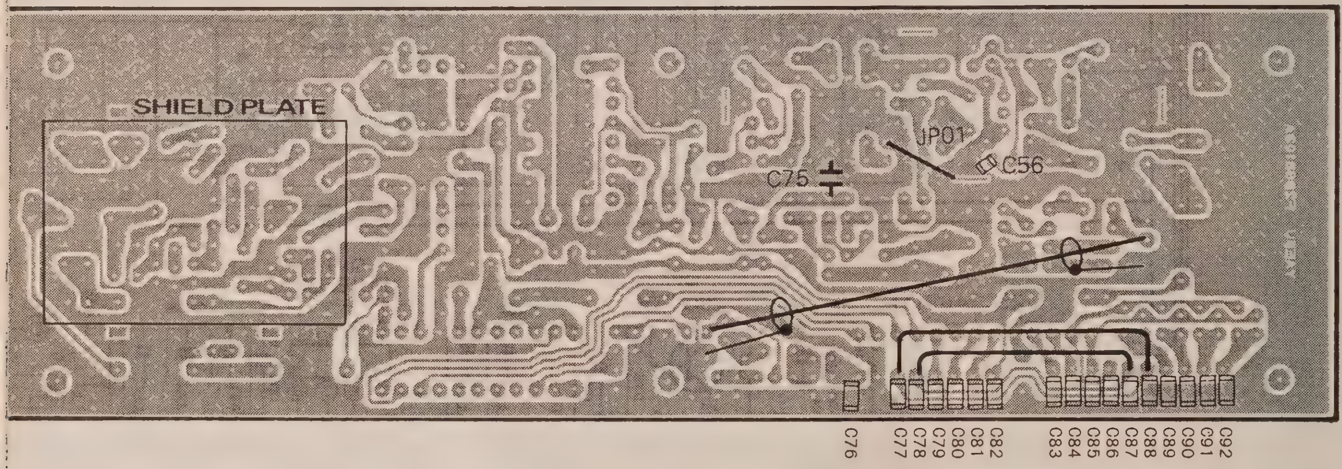
RESISTOR VALUES ARE IN Ω. 1/6W:
CAPACITOR VALUES ARE IN μF.
INDUCTOR VALUES ARE IN HENRIES:

(T)CAPACITORS ARE TANTALUM.
DIODES ARE TYPE 1SS270 UNLESS OTHERWISE NOTED.

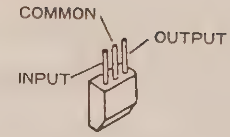
※ 430MHz LOCAL UNIT : See page 17.



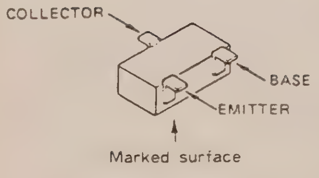
Solder side (obverse)



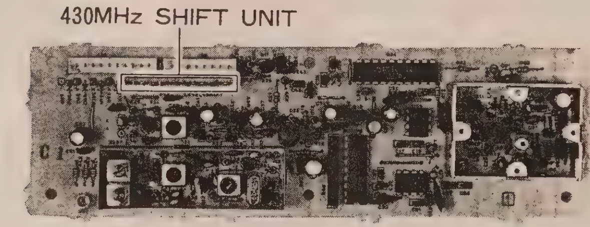
Solder side (reverse)



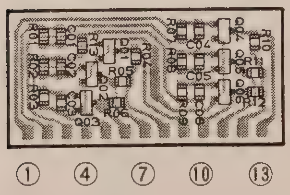
μPC78L05(Q8015)



2SC2712GR(LG)
(Q9201-9206)



430MHz SHIFT UNIT
(No. 92××)



Solder side (obverse)

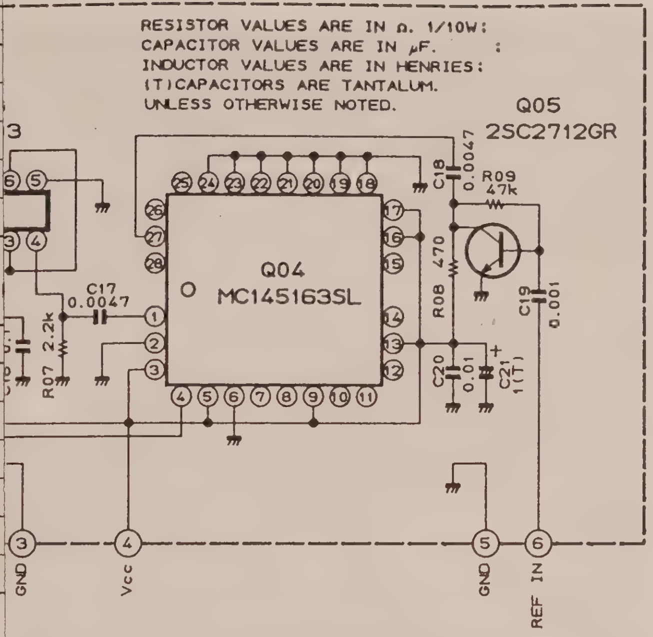
CIRCUIT DIAGRAM

430MHz PLL

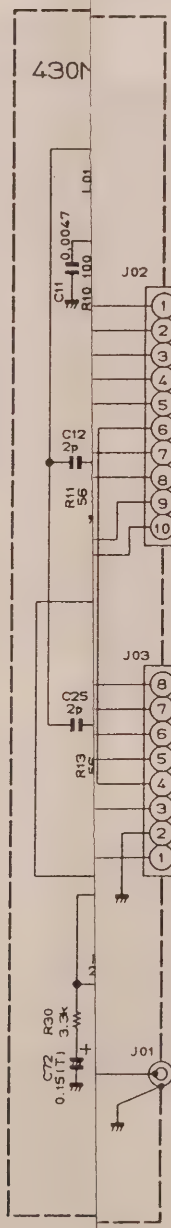
	E(S)	C(D)	B (G₁)	(G₂)	REMARK
Q8001	0.96	8.90	0		
Q8002	1.2	7.7	2.0		
Q8007	0	4.40	0.55		
Q8009	4.75	1.00	1.70		
Q8010	0	7.80	0.01		

430MHz PLL

	1(IN)	2(GND)	3(OUT)	4	5	6	7	8
Q8003	2.5	5.1	—	2.9	0	4.6	—	2.6
Q8004	0	5.10	—	—	5.10	5.10	0	4.45
Q8005	2.57	5.10	5.10	2.73	0	—	—	2.52
Q8006	7.5	2.9	—	7.5	7.5	—	7.5	—
Q8008	—	0	7.5	—	7.5	—	4.4	0.4
Q8015	9.0	0	5.0					

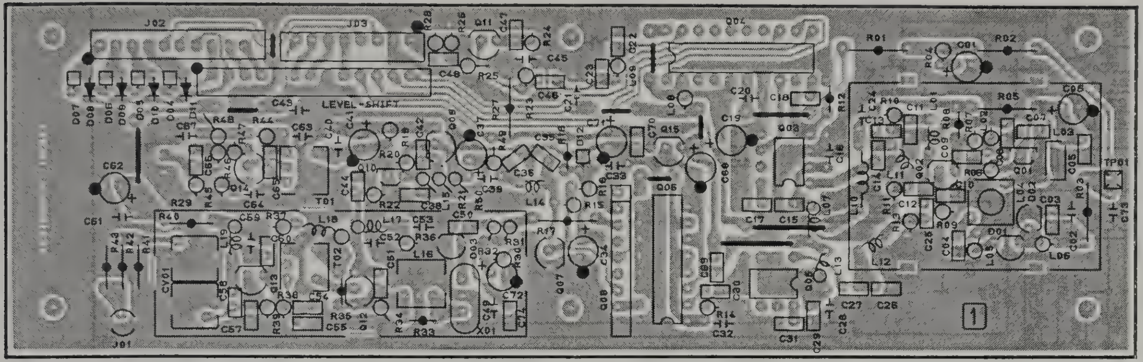


※ 430MHz LOCAL UNIT Parts Layout : See page 13.

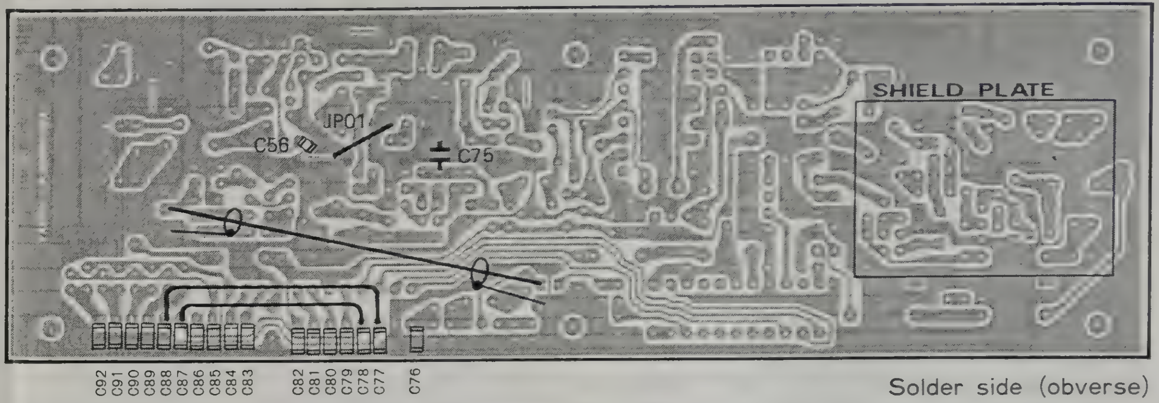


430MHz PLL UNIT PARTS LAYOUT

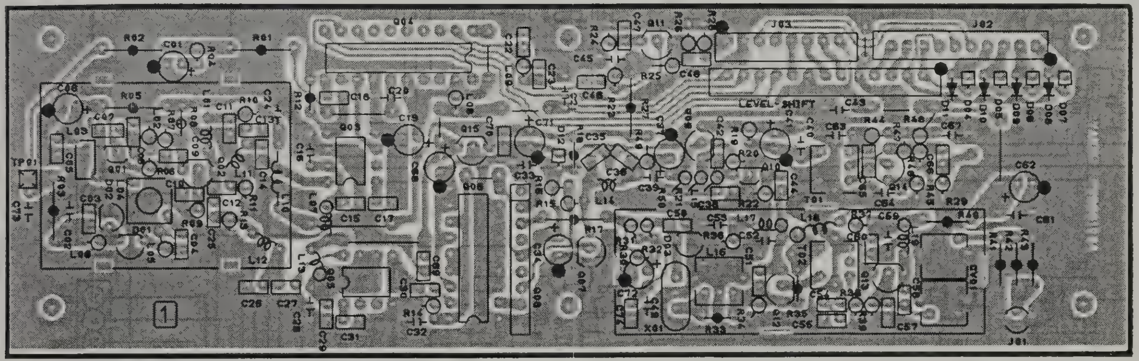
430MHz PLL UNIT (No. 8×××)



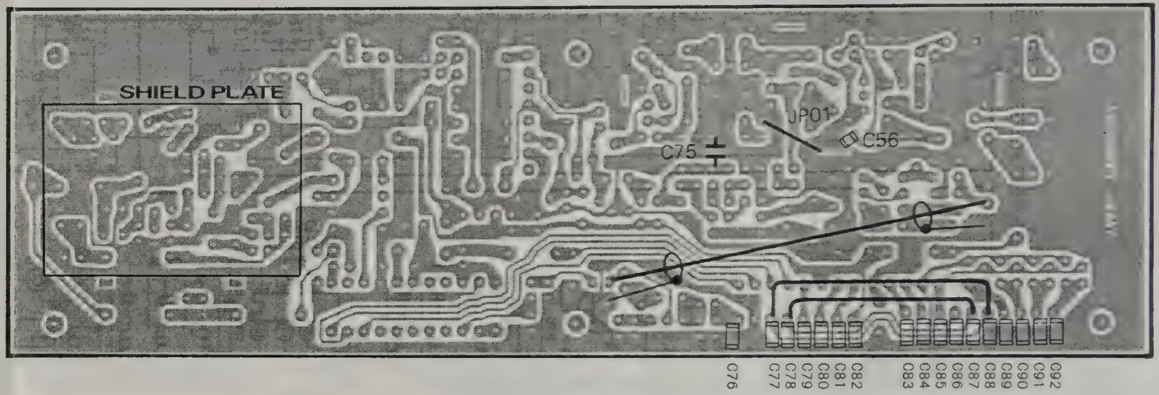
Component side (obverse)



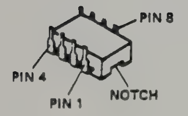
Solder side (obverse)



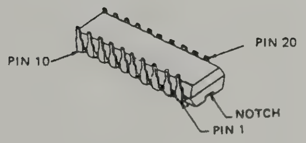
Component side (reverse)



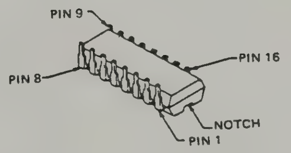
Solder side (reverse)



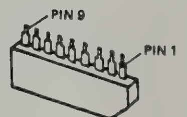
MB504(Q8003)
MB505-16(Q8005)



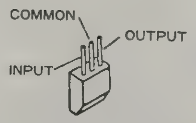
MC145156P(Q8004)



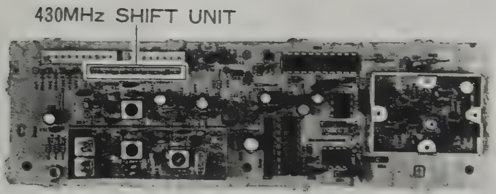
TC9122P(Q8006)

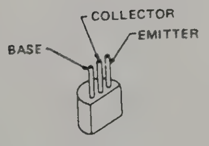


TC5081AP(Q8008)

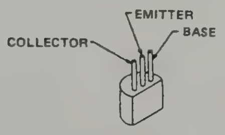


μPC78L05(Q8015)

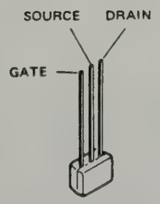




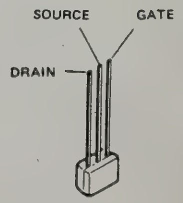
2SC458C(Q8007,8011)
2SC535B
(Q8009,8012,8014)



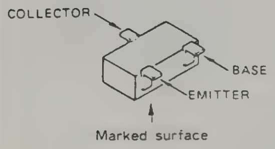
2SC2407A(Q8013)
2SC3355(Q8002)



2SK241GR(Q8010)

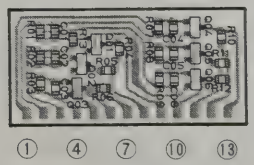


2SK507F(Q8001)



2SC2712GR(LG)
(Q9201-9206)

430MHz SHIFT UNIT
(No. 92××)



Solder side (obverse)

430MHz PLL UNIT CIRCUIT DIAGRAM

430MHz PLL UNIT VOLTAGE CHART

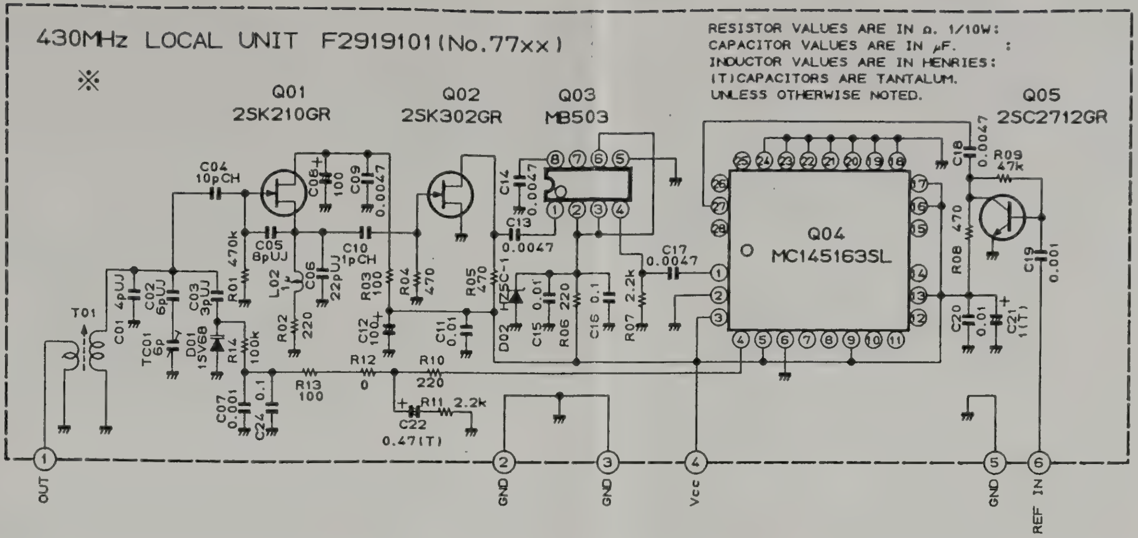
(DC VOLTS)

	E(S)	C(D)	B (G₁)	(G₂)	REMARKS		E(S)	C(D)	B (G₁)	(G₂)	REMARKS
Q8001	0.96	8.90	0			Q8011	1.4	7.5	2.0		
Q8002	1.2	7.7	2.0			Q8012	-3.0	8.7	3.6		
Q8007	0	4.40	0.55			Q8013	0.86	8.65	1.50		
Q8009	4.75	1.00	1.70			Q8014	1.2	8.6	1.9		
Q8010	0	7.80	0.01								

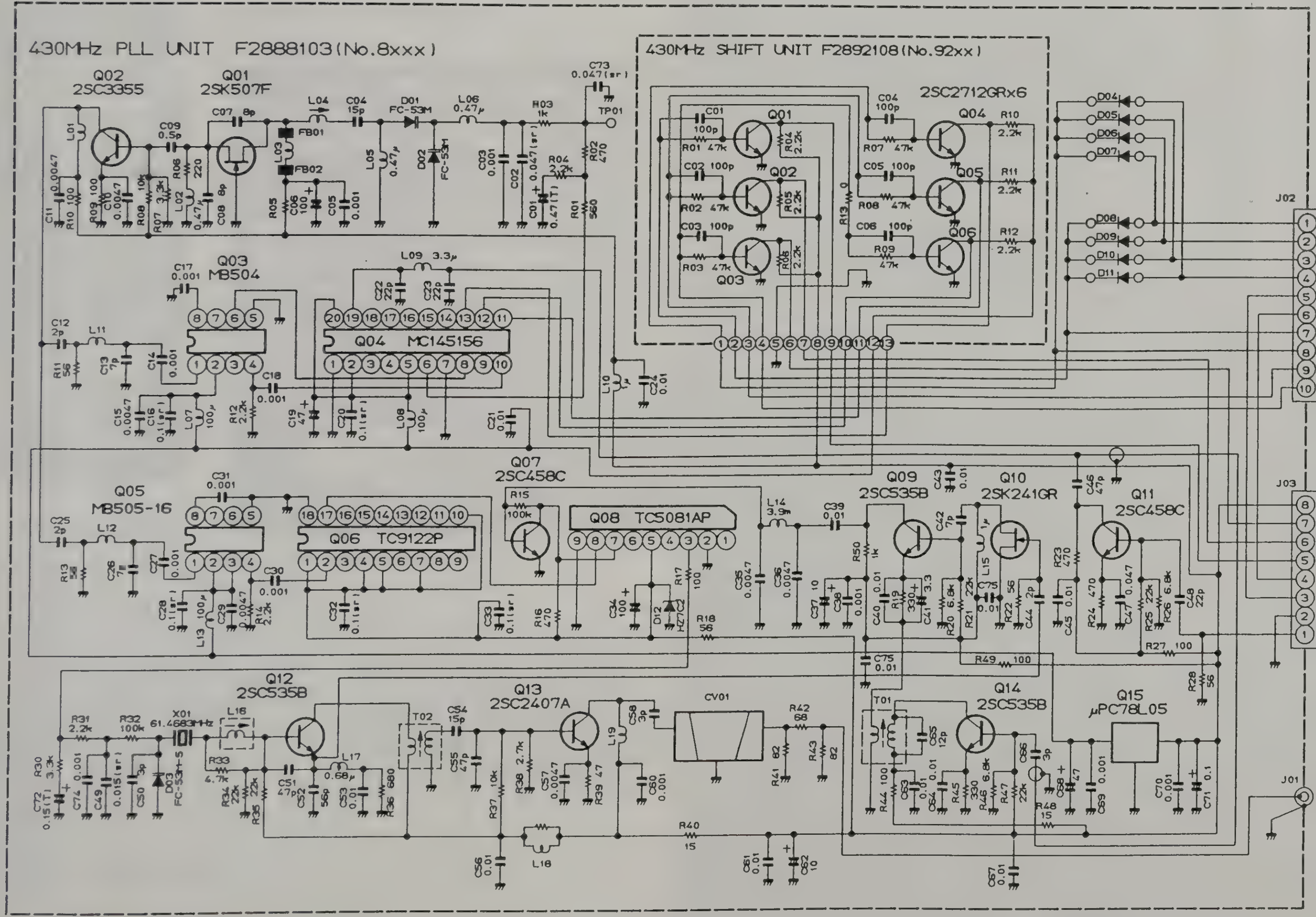
430MHz PLL UNIT IC VOLTAGE CHART

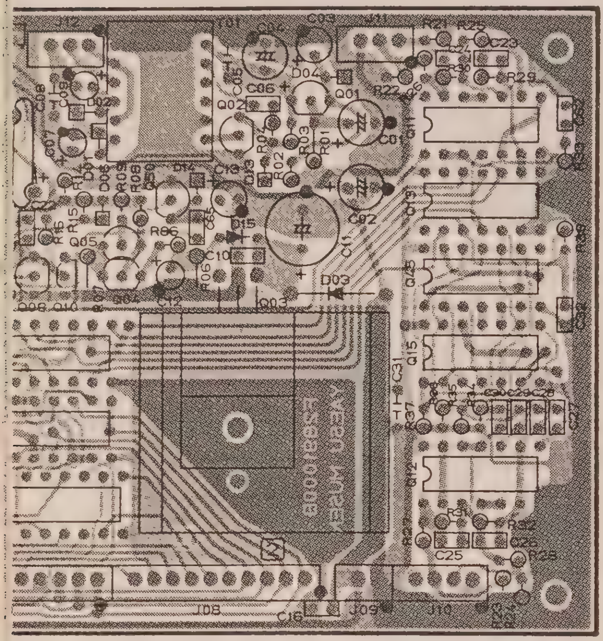
(DC VOLTS)

	1(IN)	2(GND)	3(OUT)	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	REMARKS
Q8003	2.5	5.1	—	2.9	0	4.6	—	2.6													
Q8004	0	5.10	—	—	5.10	5.10	0	4.45	—	2.10	0.06	0.06	0.06	—	—	—	—	—	2.25	5.10	
Q8005	2.57	5.10	5.10	2.73	0	—	—	2.52													
Q8006	7.5	2.9	—	7.5	7.5	—	7.5	—	—	7.5	—	—	—	—	—	—	0.4	0			
Q8008	—	0	7.5	—	7.5	—	4.4	0.4	0												
Q8015	9.0	0	5.0																		

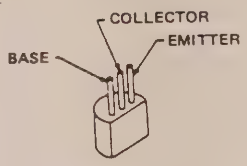

430MHz LOCAL UNIT F2919101(No.77xx)
※
RESISTOR VALUES ARE IN Ω. 1/10W:
CAPACITOR VALUES ARE IN μF. :
INDUCTOR VALUES ARE IN HENRIES:
(T)CAPACITORS ARE TANTALUM.
UNLESS OTHERWISE NOTED.
Q01 2SK210GR
Q02 2SK302GR
Q03 MB503
Q04 MC145163SL
Q05 2SC2712GR
T01
OUT
GND
GND
Vcc
GND
REF IN

※ 430MHz LOCAL UNIT Parts Layout : See page 13.

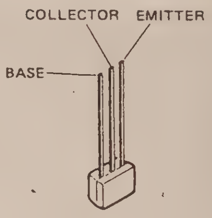




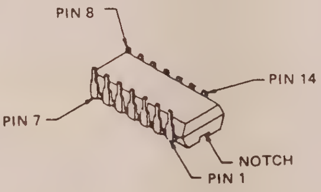
Component side (obverse)



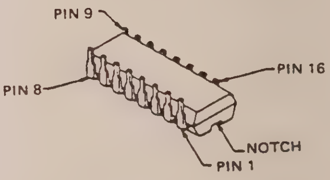
2SA733AQ(Q1046)
2SC458C
(Q1004-1006,1009
1022,1023)
2SC1384R(Q1002)
2SD667C(Q1001)



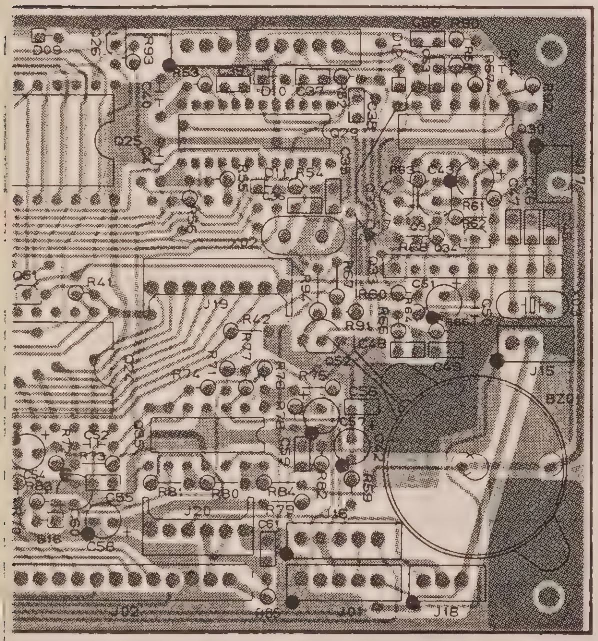
BA1A4M(Q1049)
BA1A4P
(Q1010,1016-1018
1026,1036-1044)
BN1A4M(Q1048)
BN1L4L(Q1051)



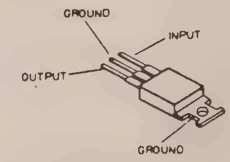
LA6324(Q1035)
MC14001BCP(Q1030)
MC14011BCP(Q1014)
MC14013BCP(Q1013)
MC14066BCP(Q1021)
MC14069UBCP(Q1011,1012)
MC14072BCP(Q1045)
MC14081BCP(Q1015)



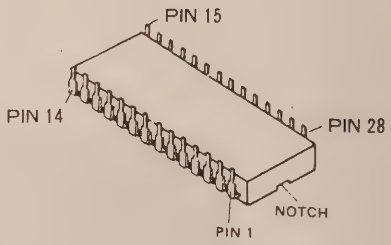
HD74HC139P(Q1047)
MC14555BCP(Q1020)
MC14556BCP(Q1019)
μPD6302CA(Q1029)



Component side (reverse)



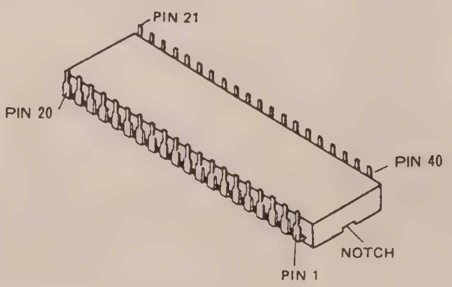
μPC7805H(Q1003)



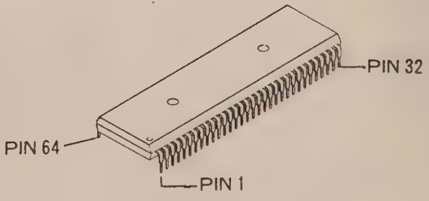
HM6264ALP-12(Q1007)

CHART (DC VOLTS)

11	12	13	14	15	16	17	REMARKS
28	29	30	31	32	33	34	
45	46	47	48	49	50	51	
62	63	64					
0	5.00	0.80	0.01	0.05	5.00	5.00	
5.00	0.02	5.00	0.05	4.60	5.00	5.00	
5.00	5.00	5.00	5.00	5.00	5.00	0.70	
5.00	3.20	2.50					

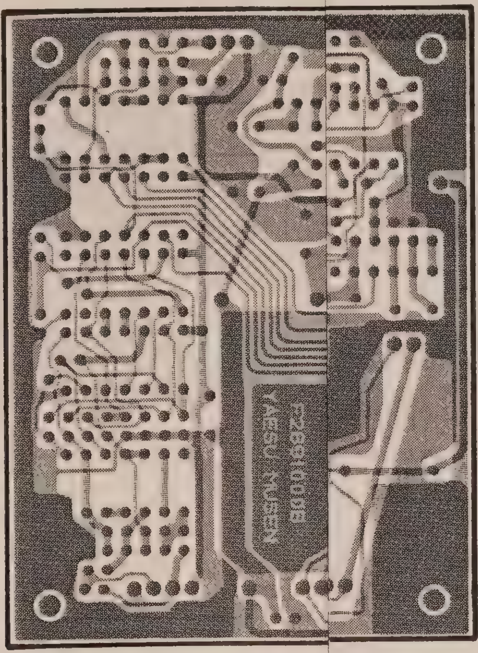


HD63A21P(Q1024,1025)

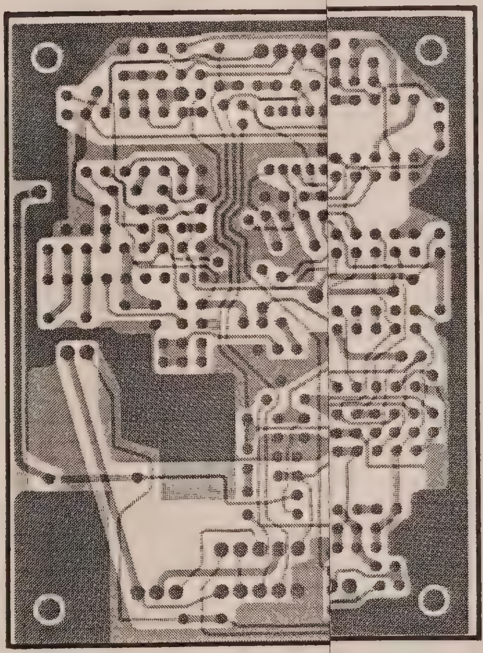


HD63A01Y0(Q1008)

IT PARTS LAYOUT



(obverse)



(reverse)

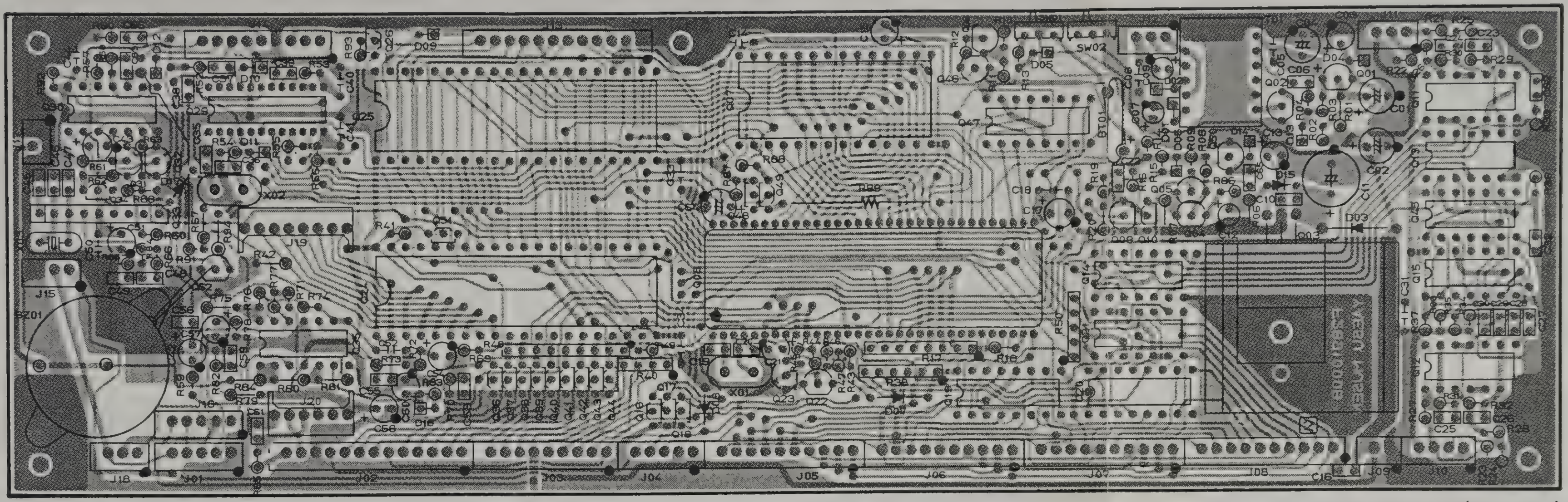
CNTL UNIT VOLTAGE

	E (S)	C (D)	(G_1) B (G_2)	REMARKS	
Q1001	12.3	13.2	13.0		Q1034
Q1002	0	12.2	-0.7		Q1036
Q1004	0.20	0.21	0.90		Q1037
Q1005	0.20	4.60	0.21		Q1038
Q1006	0	0.06	0.66		Q1039
Q1009	0	5.0	0		Q1040
Q1010	0	0	0.03		Q1041
Q1016	0	0.70	0.06		Q1042
Q1017	0	0.01	4.60		Q1043
Q1018	0	0.03	4.60		Q1044
Q1022	0	0.77	0.05		Q1046
Q1023	0	5.00	0.77		Q1048
Q1026	0.04	12.70	0		Q1049
Q1031	0	5.00	0.01		Q1051
Q1032	0	5.0	0		

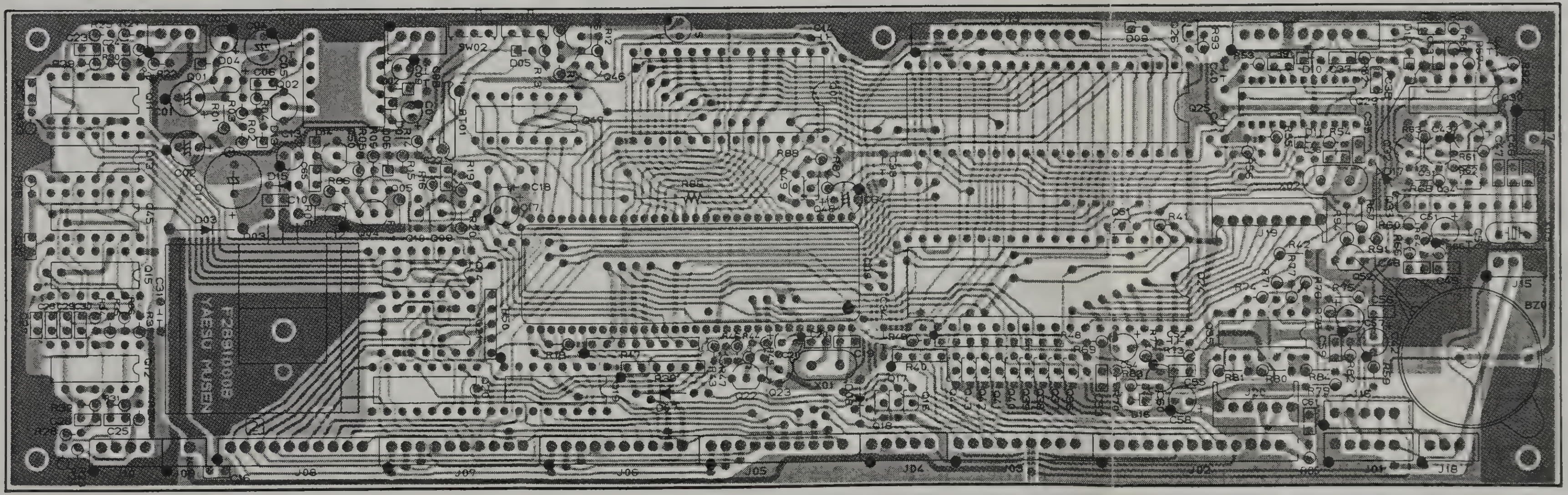
ate.

CNTL UNIT PARTS LAYOUT

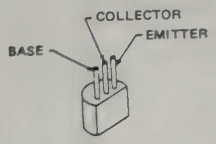
CNTL UNIT (No. 1XXX)



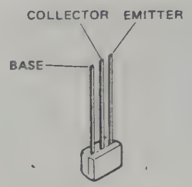
Component side (obverse)



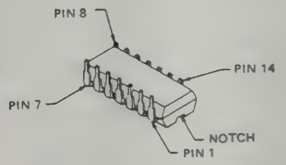
Component side (reverse)



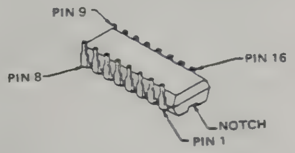
2SA733AQ(Q1046)
2SC458C
(Q1004-1006,1009
1022,1023)
2SC1384R(Q1002)
2SD667C(Q1001)



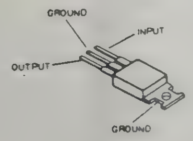
BA1A4M(Q1049)
BA1A4P
(Q1010,1016-1018
1026,1036-1044)
BN1A4M(Q1048)
BN1L4L(Q1051)



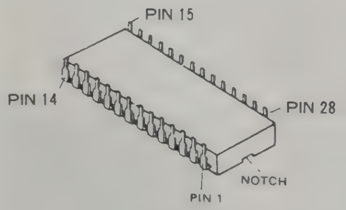
LA6324(Q1035)
MC14001BCP(Q1030)
MC14011BCP(Q1014)
MC14013BCP(Q1013)
MC14066BCP(Q1021)
MC14069UBCP(Q1011,1012)
MC14072BCP(Q1045)
MC14081BCP(Q1015)



HD74HC139P(Q1047)
MC14555BCP(Q1020)
MC14556BCP(Q1019)
μPD6302CA(Q1029)



μPC7805H(Q1003)



HM6264ALP-12(Q1007)

CNTL UNIT IC VOLTAGE CHART

(DC VOLTS)

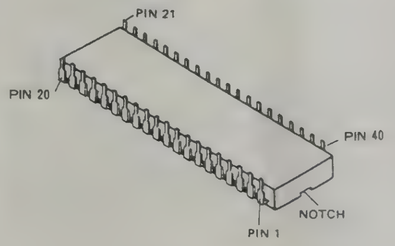
	1 21	2 22	3 23	4 24	5 25	6 26	7 27	8 28	9 29	10 30	11 31	12 32	13 33	14 34	15 35	16 36	17 37	18 38	19 39	20 40	REMARKS
Q1007	0	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	0.07	0.08	0.08	0	1.00	1.50	1.70	1.50	1.60	4.10	
	4.30	2.90	0.70	0.70	1.50	5.00	5.00	5.00													
Q1024	0	0	0	0	0	0	0	0	0	0	5.00	0	0	0	5.00	0	0	5.00	0.04	5.00	
	5.00	5.00	5.00	5.00	2.50	0.52	0.48	0.52	0.52	0.53	0.52	0.55	0.57	5.00	5.00	5.00	1.04	1.10	0.01	5.00	
Q1025	0	5.00	5.00	5.00	5.00	0	5.00	0	0	0	0	0	0	5.00	5.00	0	3.60	5.00	2.50	5.00	
	4.90	5.00	5.00	5.00	2.50	1.00	1.60	1.60	1.80	1.00	1.60	1.60	4.70	5.00	2.60	3.70	5.00	5.00	0.05	0	
Q1029	2.50	2.5	0	0.30	2.50	0	0	2.50	5.00	2.50	3.30	5.00	2.50	2.50	2.50	2.50	2.50	2.50	2.50	0	
	2.50	2.50	2.50	0.48																	

CNTL UNIT IC VOLTAGE CHART

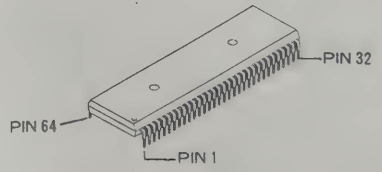
(DC VOLTS)

	1 18 35 52	2 19 36 53	3 20 37 54	4 21 38 55	5 22 39 56	6 23 40 57	7 24 41 58	8 25 42 59	9 26 43 60	10 27 44 61	11 28 45 62	12 29 46 63	13 30 47 64	14 31 48	15 32 49	16 33 50	17 34 51	REMARKS
Q1008	0	2.00	2.00	0	5.00	5.00	4.60	5.00	3.80	0	0	5.00	0.80	0.01	0.05	5.00	5.00	
	0.02	0.03	0.03	5.00	5.00	4.30	5.00	4.70	4.70	5.00	5.00	0.02	5.00	0.05	4.60	5.00	5.00	
	5.00	0	5.00	5.00	5.00	5.00	5.00	0	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	0.70	
	0.70	1.50	1.80	0.90	1.50	1.60	1.60	0	4.20	4.70	5.00	3.20	2.50					

※ In the initialize state.

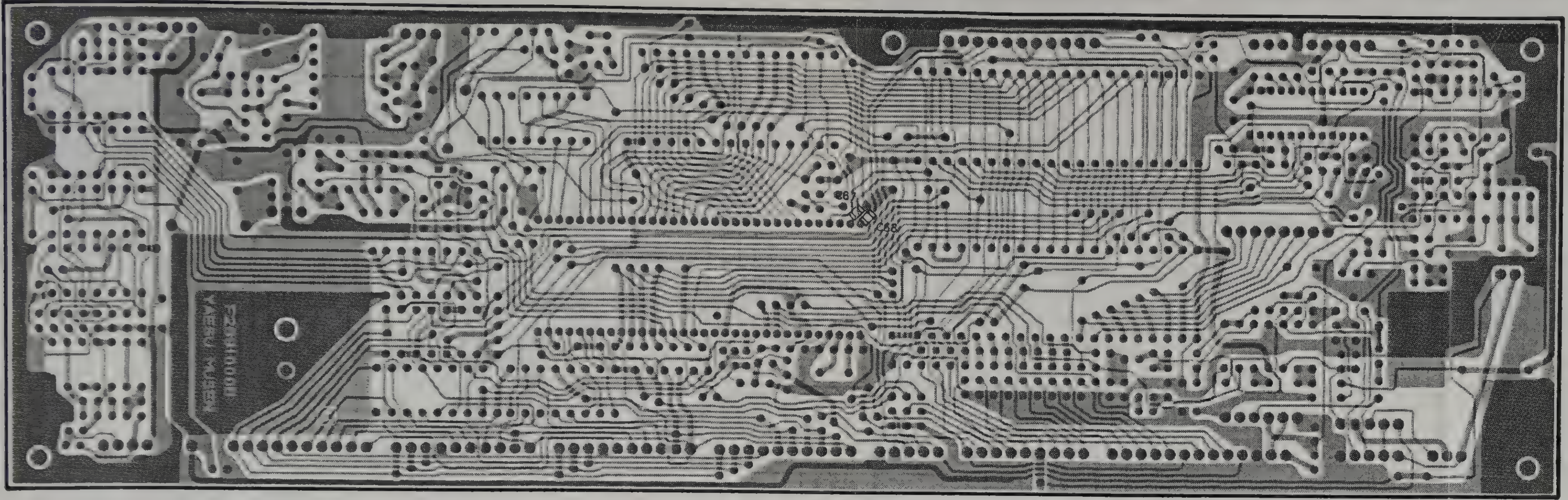


HD63A21P(Q1024,1025)

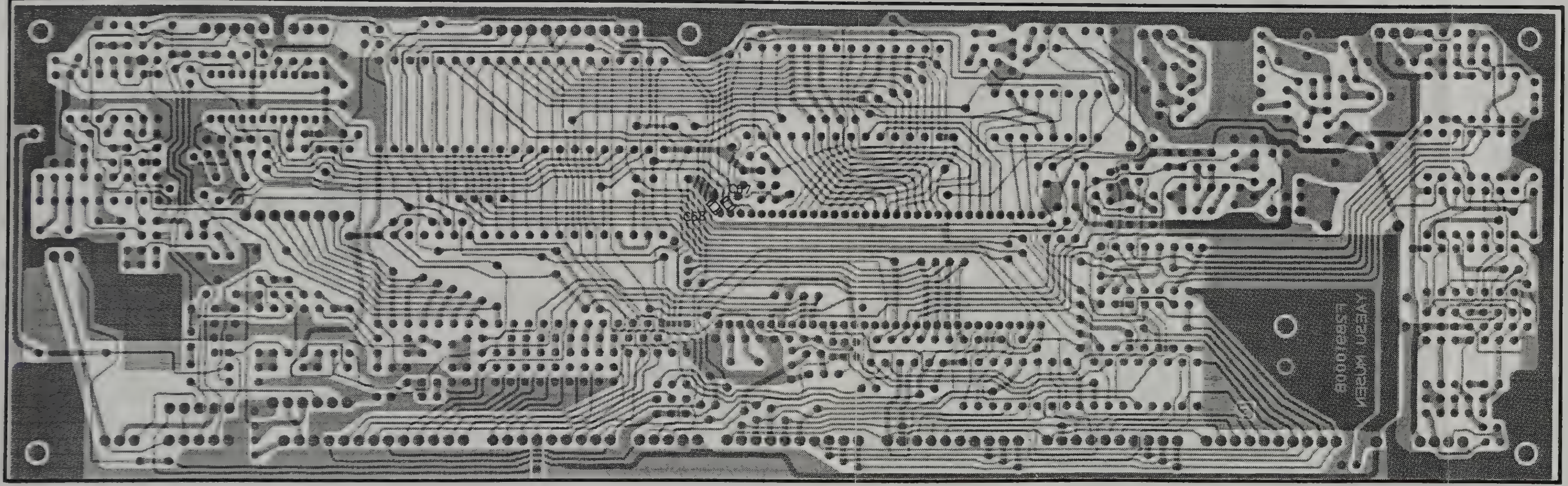


HD63A01Y0(Q1008)

CNTL UNIT PARTS LAYOUT



Chip side (obverse)



Chip side (reverse)

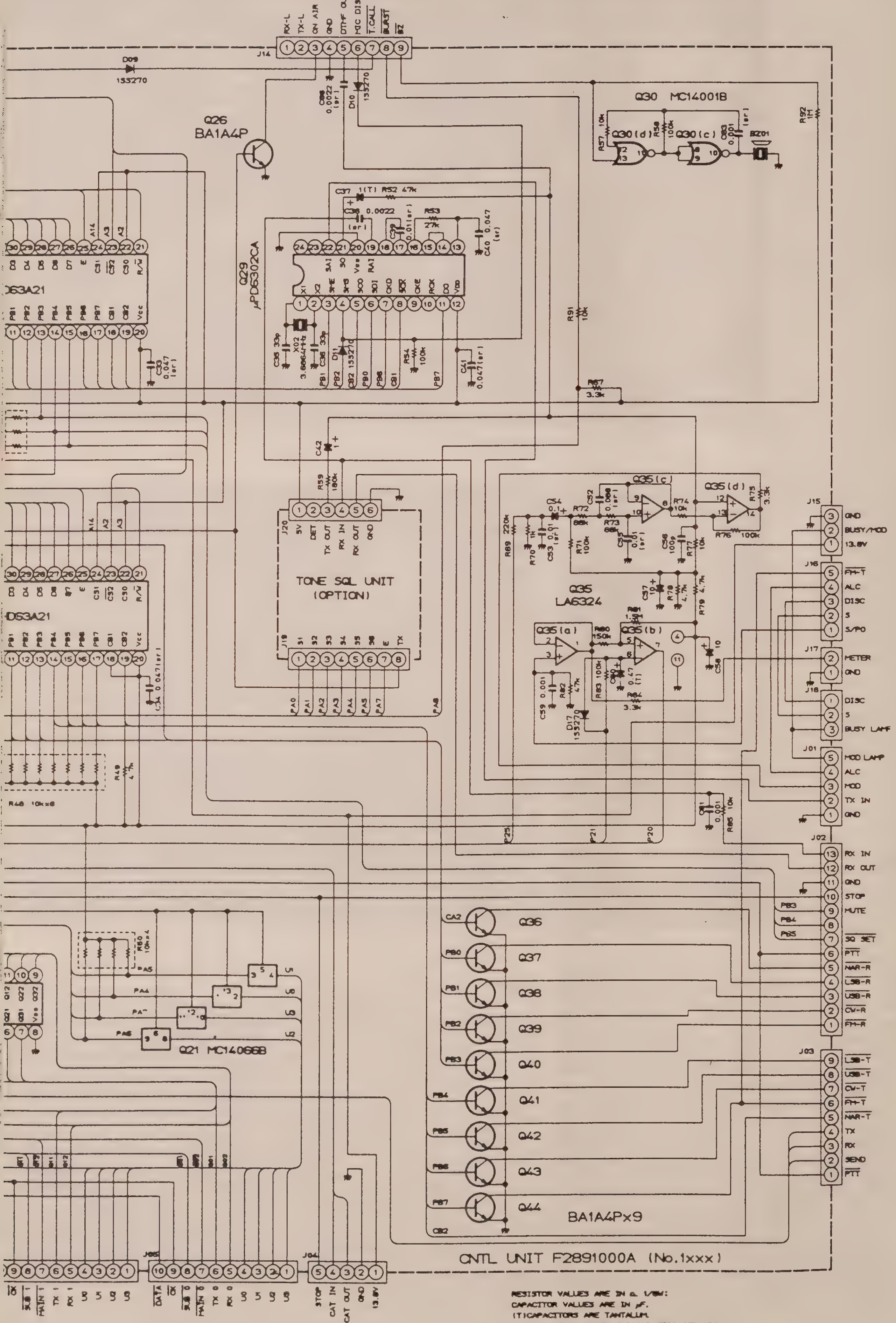
CNTL UNIT VOLTAGE CHART (DC VOLTS)

	E (S)	C (D)	B (G_1) (G_2)	REMARKS		E (S)	C (D)	B (G_1) (G_2)	REMARKS
Q1001	12.3	13.2	13.0		Q1034	5.00	0.14	5.00	
Q1002	0	12.2	-0.7		Q1036	0	0.02	0.02	
Q1004	0.20	0.21	0.90		Q1037	0	8.00	0.02	
Q1005	0.20	4.60	0.21		Q1038	0	0.01	5.00	
Q1006	0	0.06	0.66		Q1039	0	0.10	0.03	
Q1009	0	5.0	0		Q1040	0	8.00	0.03	
Q1010	0	0	0.03		Q1041	0	4.80	0.04	
Q1016	0	0.70	0.06		Q1042	0	0.02	5.00	
Q1017	0	0.01	4.60		Q1043	0	7.90	0.03	
Q1018	0	0.03	4.60		Q1044	0	7.90	0.03	
Q1022	0	0.77	0.05		Q1046	5.0	5.0	4.4	
Q1023	0	5.00	0.77		Q1048	5.00	5.00	0.02	
Q1026	0.04	12.70	0		Q1049	0	0.02	1.60	
Q1031	0	5.00	0.01		Q1051	5.0	0.1	4.6	
Q1032	0	5.0	0						

CNTL UNIT IC VOLTAGE CHART (DC VOLTS)

	1(IN)	2(GND)	3(OUT)	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	REMARKS
Q1003	13.0	0	5.0																H ≑ 5.0
Q1011	L	H	H	L	H	L	0	H	L	L	H	H	L	5.0					L ≑ 0
Q1012	L	H	L	H	H	L	0	L	H	H	L	L	H	5.0					
Q1013	H	L	L	L	L	L	0	L	L	H	L	H	L	5.0					
Q1014	H	H	L	L	H	H	0	L	L	H	H	H	L	5.0					
Q1015	L	L	L	L	L	L	0	L	L	L	L	H	L	5.0					
Q1019	H	L	H	H	H	H	H	0	H	H	H	H	H	L	H	5.0			
Q1020	H	L	H	L	L	L	L	0	L	H	L	L	H	L	L	5.0			
Q1021	L	L	H	L	L	L	0	L	L	L	H	L	L	5.0					
Q1030	L	L	H	L	L	H	0	L	L	H	L	L	H	5.0					
Q1033	0	0.02	0.06	0	0.14	0.10	0.13	0											
Q1035	0	0	0	5.00	0.69	0.01	3.90	2.51	2.51	2.45	0	2.50	2.43	2.46					
Q1045	L	L	L	L	L	L	0	L	L	L	L	L	L	5.0					
Q1047	L	H	H	H	H	H	L	0	H	H	H	H	H	H	H	5.0			

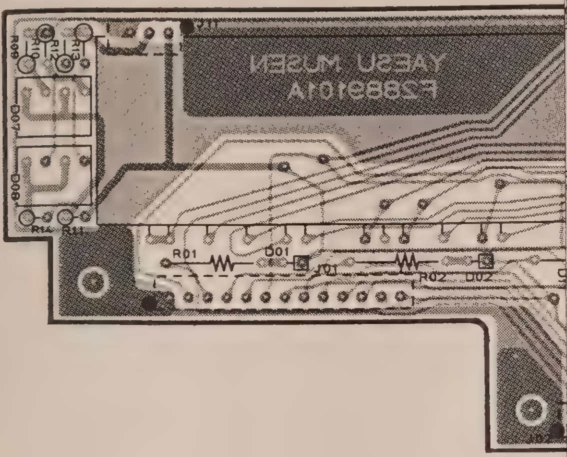
※ In the initialize state.

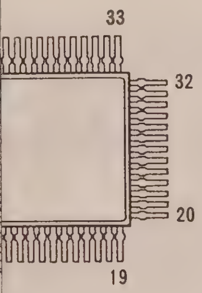


RESISTOR VALUES ARE IN Ω 1/8W:
CAPACITOR VALUES ARE IN μF.
(T)CAPACITORS ARE TANTALUM.
(or)CAPACITORS ARE SEMICONDUCTOR CERAMIC. 25WV.
UNLESS OTHERWISE NOTED.

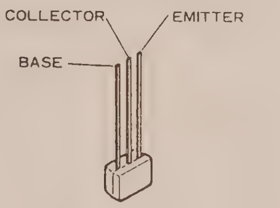
IT PARTS LAYOUT

DISPLAY UNIT (No. 2×××)

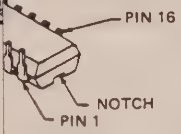




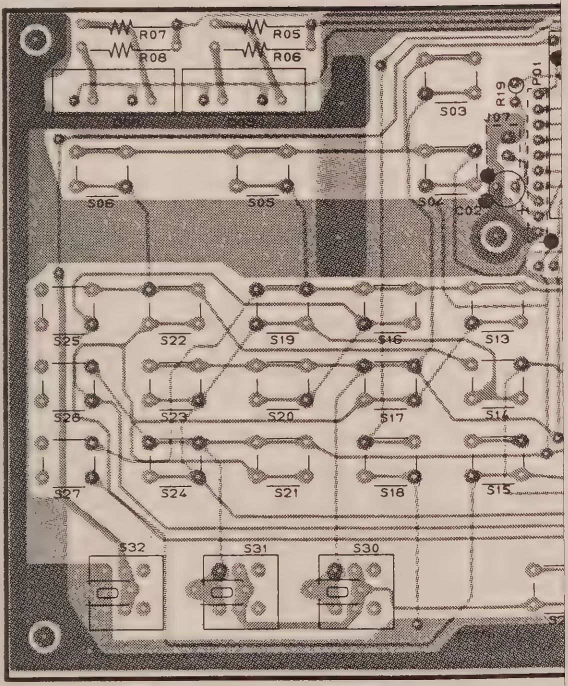
H35(Q2001)



BA1A4P(Q2002-2004)
BN1A4P(Q2006)

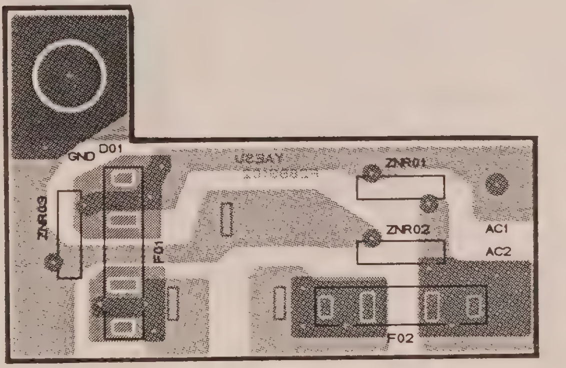


(Q2005)

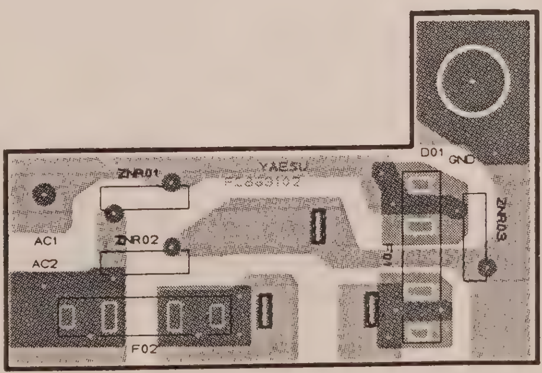


Display side (reverse)

PROTECTOR UNIT (No. 7××)

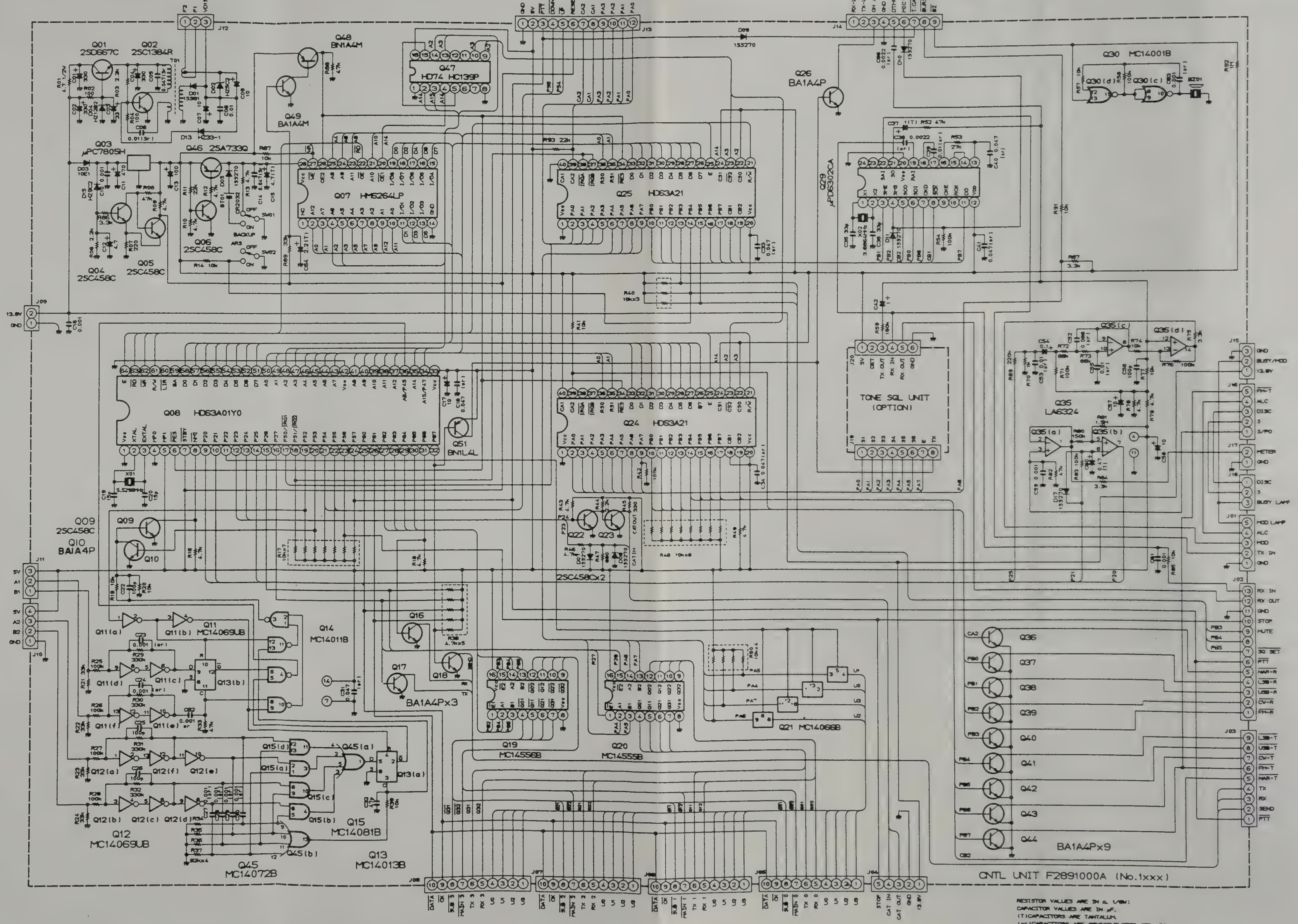


Component side (obverse)



Component side (reverse)

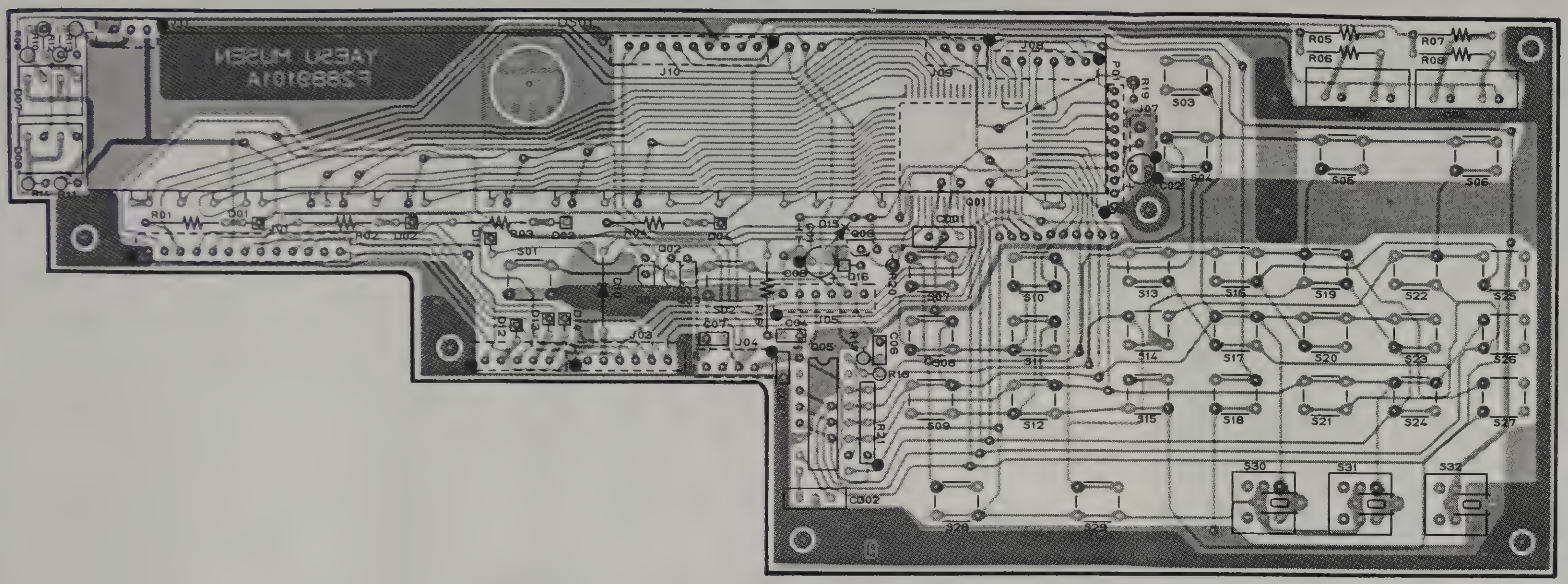
CNTL UNIT CIRCUIT DIAGRAM



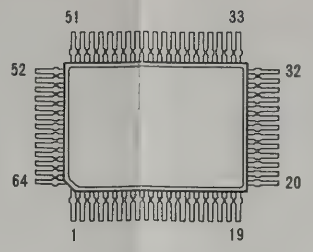
RESISTOR VALUES ARE IN Ω, 1/6W:
CAPACITOR VALUES ARE IN µF.
(T)CAPACITORS ARE TANTALUM.
(er)CAPACITORS ARE SEMICONDUCTOR CERAMIC, 25wv.
UNLESS OTHERWISE NOTED.

DISPLAY, REG and PROTECTOR UNIT PARTS LAYOUT

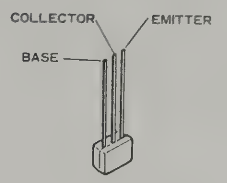
DISPLAY UNIT (No. 2XXX)



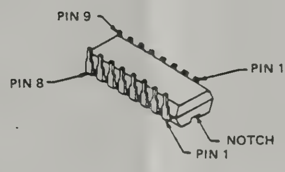
Display side (obverse)



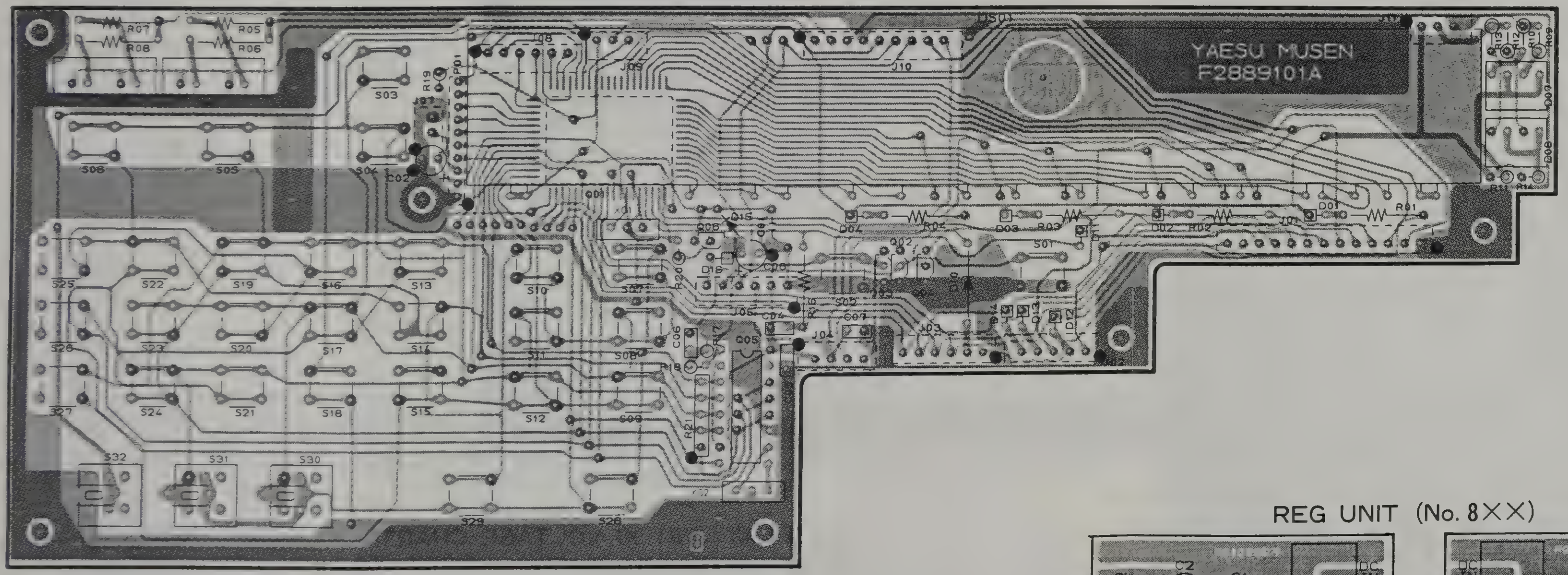
HD614022FH35(Q2001)



BA1A4P(Q2002-2004)
BN1A4P(Q2006)

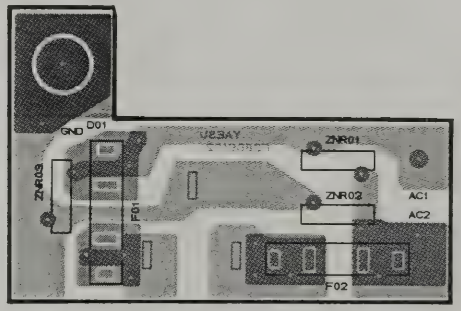


LR4087(Q2005)

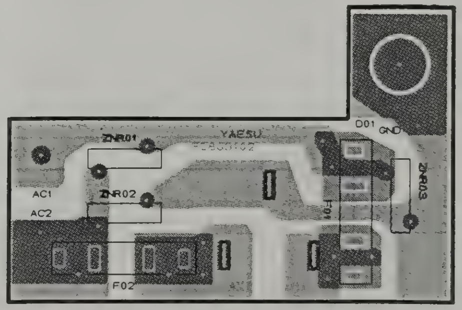


Display side (reverse)

PROTECTOR UNIT (No. 7XX)

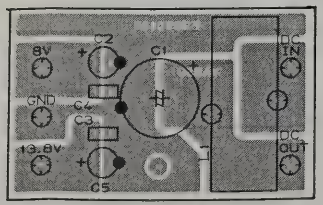


Component side (obverse)

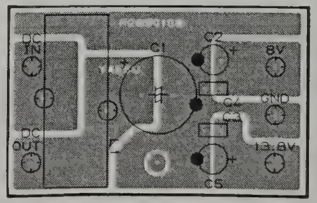


Component side (reverse)

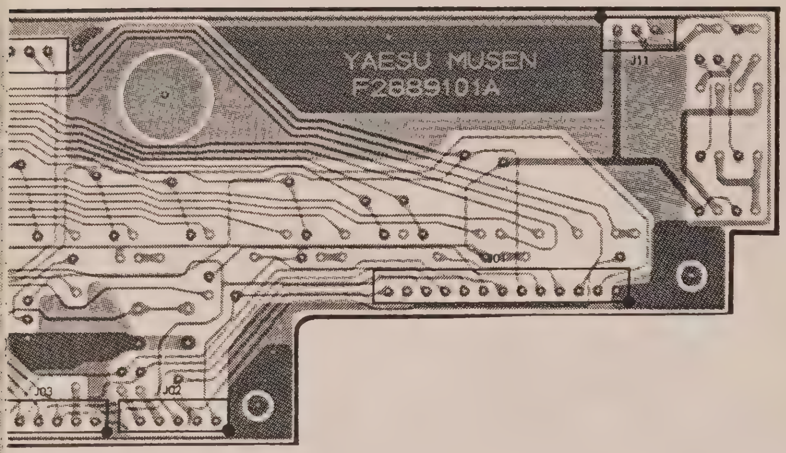
REG UNIT (No. 8XX)



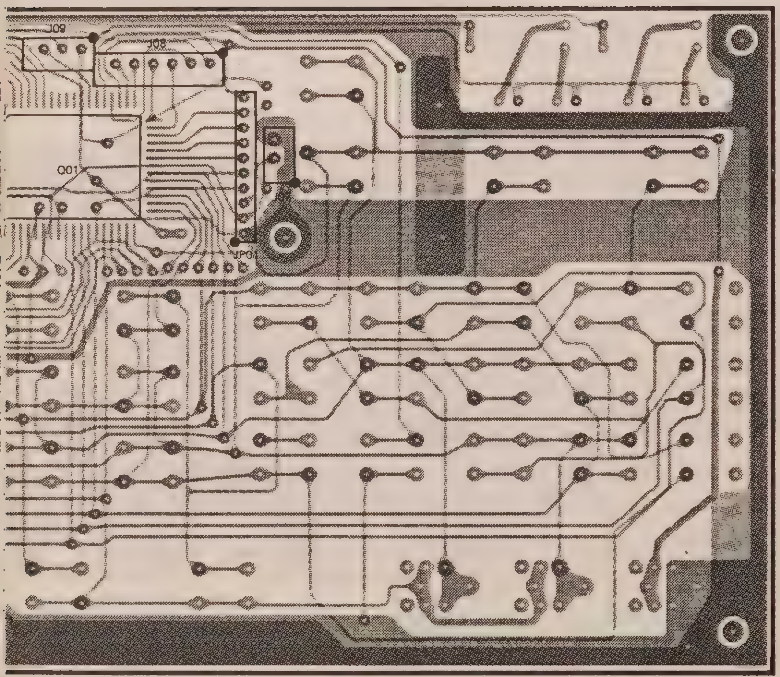
Component side (obverse)



Component side (reverse)



(obverse)

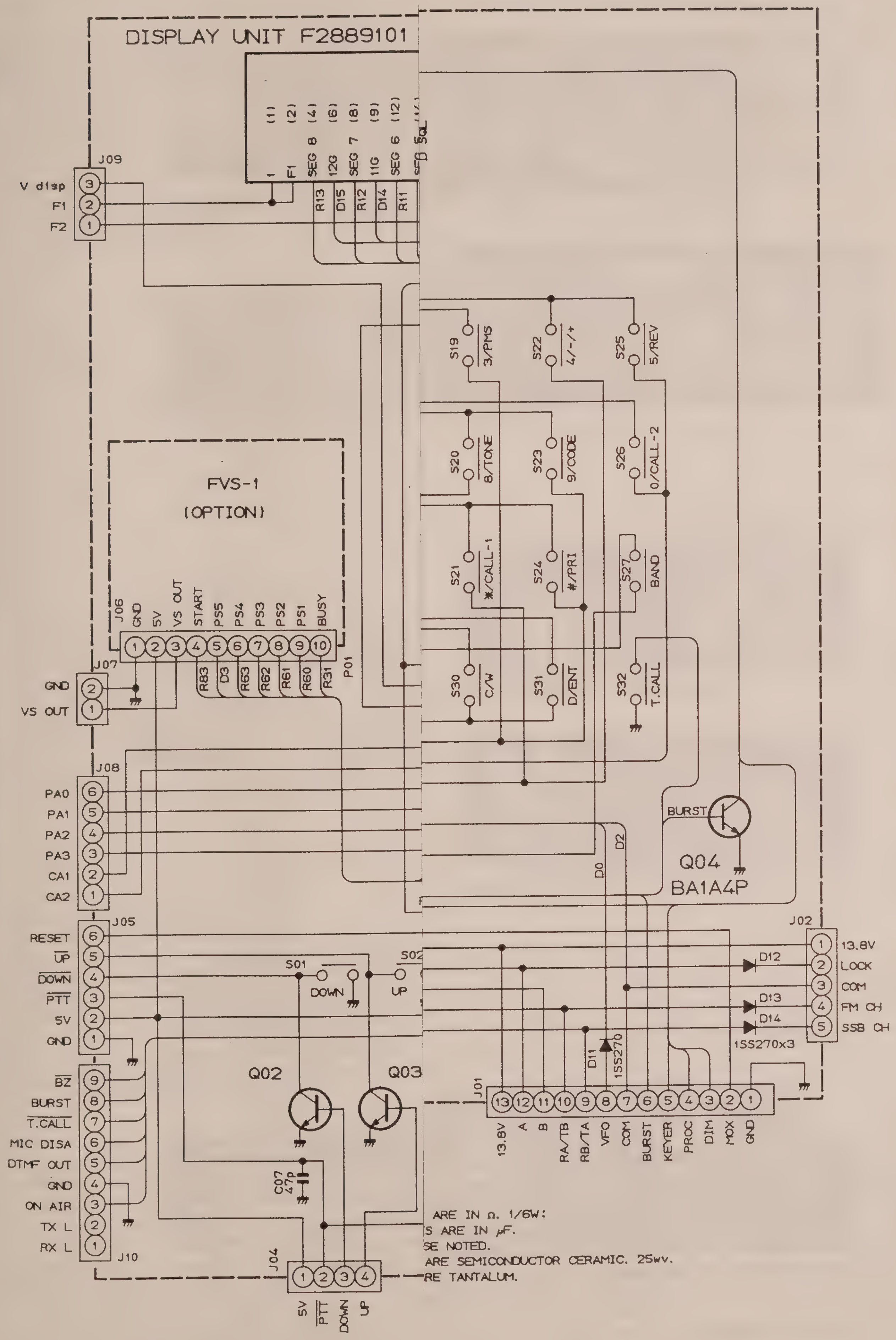


DISPLAY UNIT IC VOLTAGE CHART

(DC VOLTS)

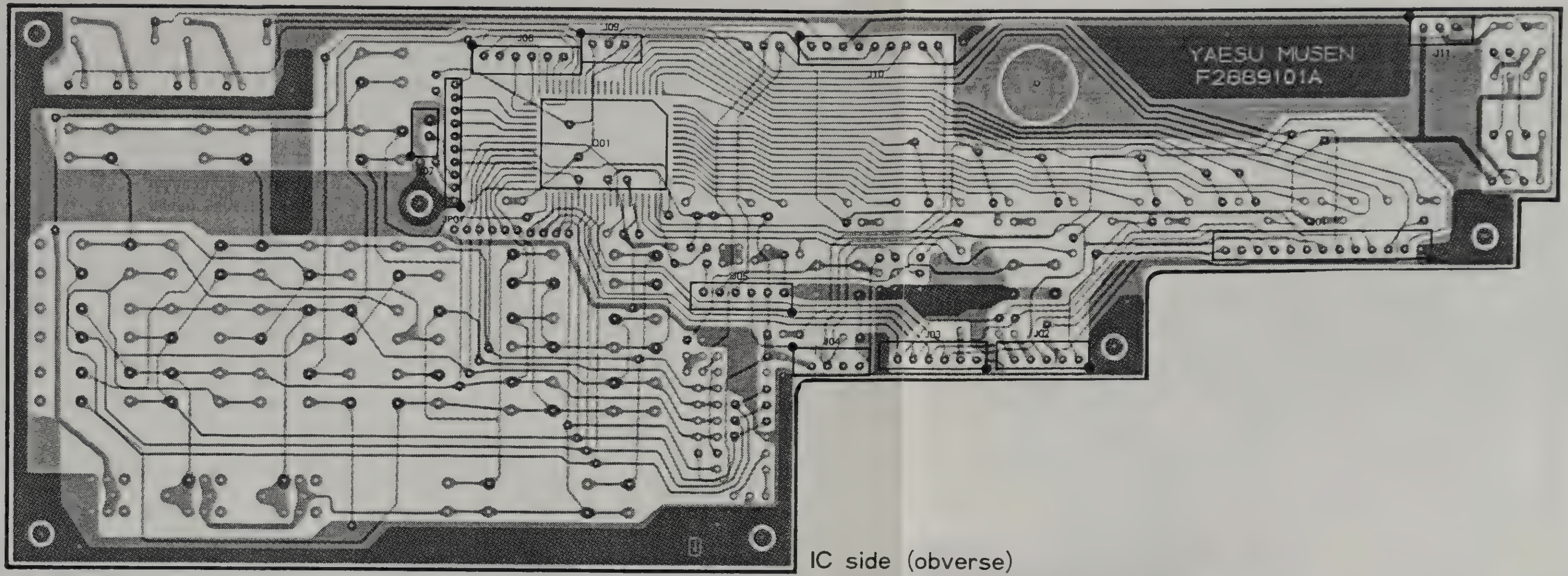
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	REMARKS
	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	
	52	53	54	55	56	57	58	59	60	61	62	63	64					
2001	-10.50	-32.00	-10.50	-13.60	-16.60	-19.80	-25.80	—	—	—	—	4.80	-32.20	5.00	5.00	5.00	5.00	
	5.00	5.00	5.00	5.00	0	0.05	0	0.01	5.0	5.00	5.00	5.00	5.00	1.10	1.00	1.05	0.35	
	0.37	0.38	0.38	0	5.00	5.00	5.00	5.00	0	5.00	0.24	2.40	0	5.00	1.10	0.80	1.05	
	-29.20	-29.20	-29.20	-29.20	-29.20	-24.00	-29.20	-29.20	-29.20	-29.20	-29.20	-29.20	-19.70					
2005	5.0	5.0	0	0	0	0	0	5.0	0	0	5.0	5.0	5.0	5.0	5.0	0		

CIRCUIT DIAGRAM

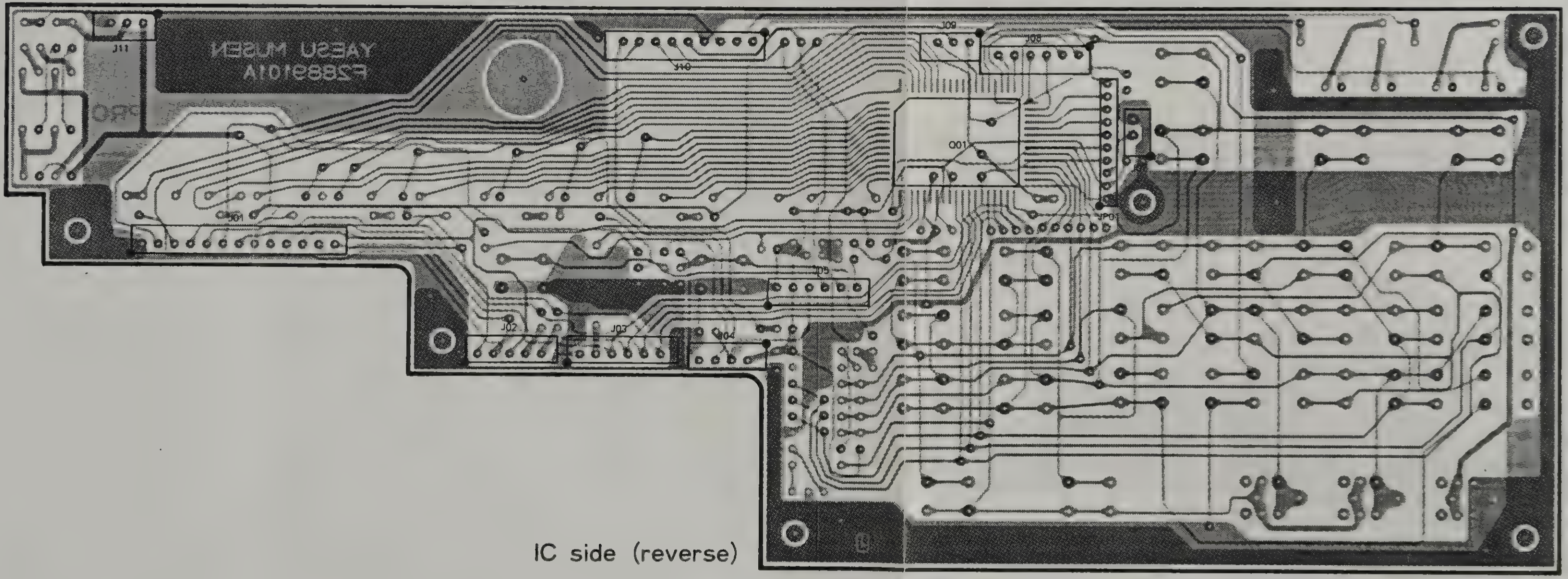


ARE IN Ω. 1/6W:
S ARE IN μF.
SE NOTED.
ARE SEMICONDUCTOR CERAMIC. 25wv.
RE TANTALUM.

DISPLAY UNIT PARTS LAYOUT



IC side (obverse)



IC side (reverse)

DISPLAY UNIT VOLTAGE CHART

(DC VOLTS)

	E(S)	C(D)	B (G_1)	B (G_2)	REMARKS		E(S)	C(D)	B (G_1)	B (G_2)	REMARKS
Q2002	0	5.0	0			Q2004	0	12.0	0		
Q2003	0	5.0	0			Q2006	0	5.0	0		

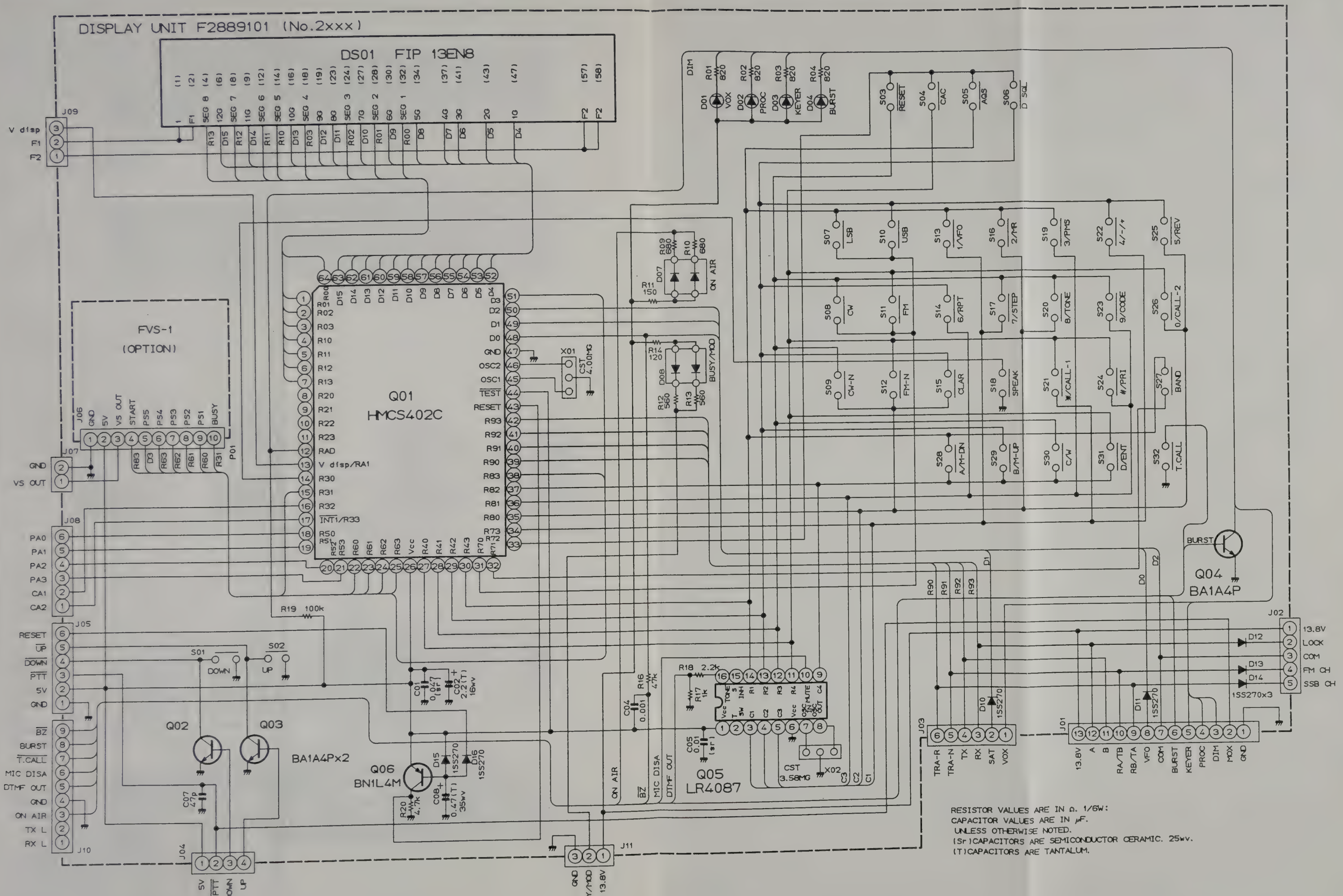
※ In the initialize state.

DISPLAY UNIT IC VOLTAGE CHART

(DC VOLTS)

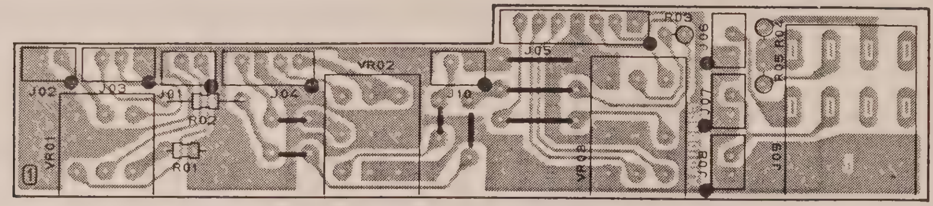
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	REMARKS
	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	
	52	53	54	55	56	57	58	59	60	61	62	63	64					
Q2001	-10.50	-32.00	-10.50	-13.60	-16.60	-19.80	-25.80	—	—	—	—	4.80	-32.20	5.00	5.00	5.00	5.00	
	5.00	5.00	5.00	5.00	0	0.05	0	0.01	5.0	5.00	5.00	5.00	5.00	1.10	1.00	1.05	0.35	
	0.37	0.38	0.38	0	5.00	5.00	5.00	5.00	0	5.00	0.24	2.40	0	5.00	1.10	0.80	1.05	
	-29.20	-29.20	-29.20	-29.20	-29.20	-24.00	-29.20	-29.20	-29.20	-29.20	-29.20	-29.20	-19.70					
Q2005	5.0	5.0	0	0	0	0	0	5.0	0	0	5.0	5.0	5.0	5.0	5.0	0		

DISPLAY UNIT CIRCUIT DIAGRAM

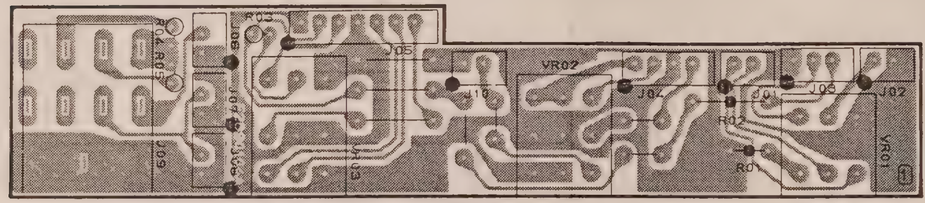


RESISTOR VALUES ARE IN Ω. 1/6W:
CAPACITOR VALUES ARE IN μF.
UNLESS OTHERWISE NOTED.
(Sr)CAPACITORS ARE SEMICONDUCTOR CERAMIC. 25wv.
(T)CAPACITORS ARE TANTALUM.

VR-A UNIT (No. 4××)

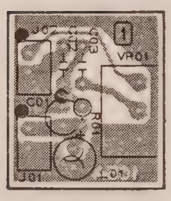


Component side (obverse)

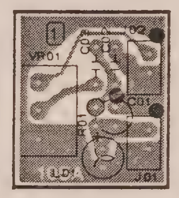


Component side (reverse)

VR-B UNIT (No. 5××)

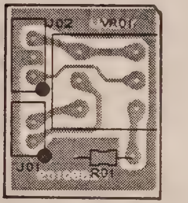


Component side (obverse)

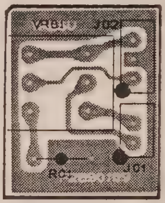


Component side (reverse)

VR-D UNIT (No. 9××)

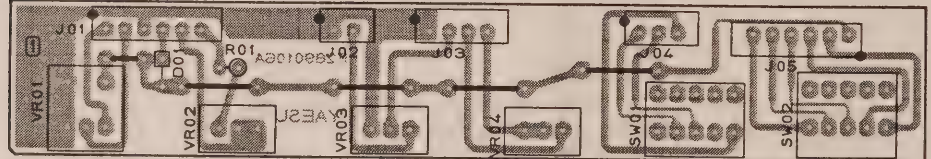


Component side (obverse)

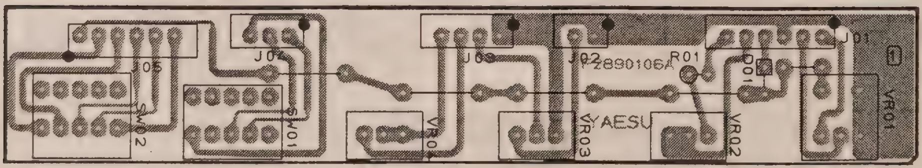


Component side (reverse)

VR-C UNIT (No. 2××)

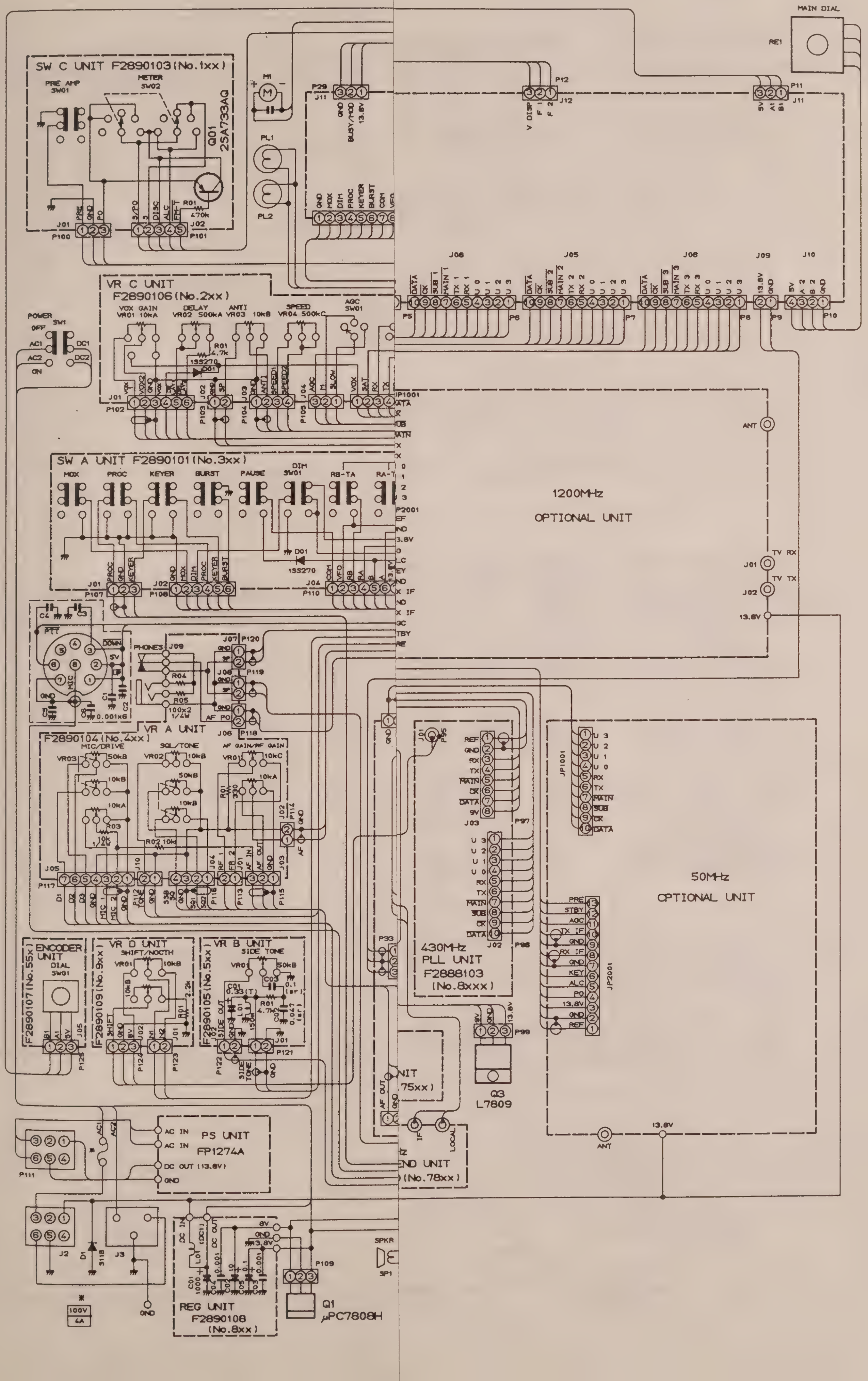


Component side (obverse)



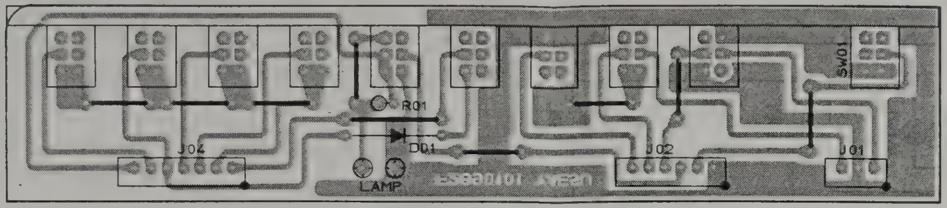
Component side (reverse)

NECTION DIAGRAM

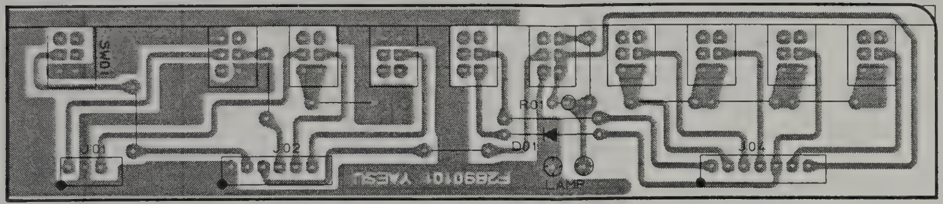


SW, ENCODER and VR UNIT PARTS LAYOUT

SW-A UNIT (No. 3××)

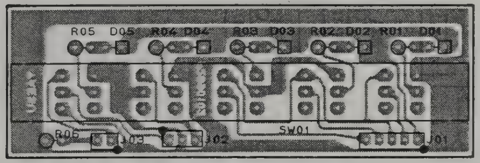


Component side (obverse)

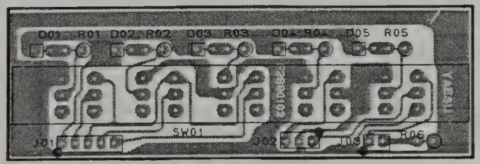


Component side (reverse)

SW-B UNIT (No. 6××)

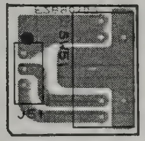


Component side (obverse)

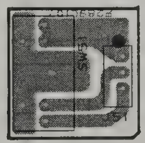


Component side (reverse)

ENCODER UNIT (No. 55×)

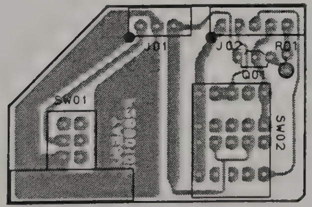


Component side (obverse)

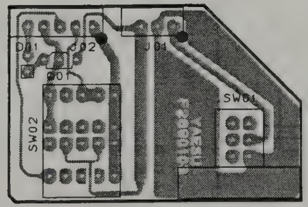


Component side (reverse)

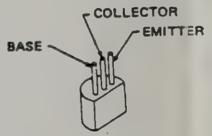
SW-C UNIT (No. 1××)



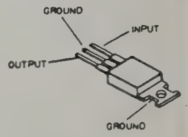
Component side (obverse)



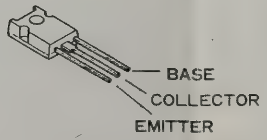
Component side (reverse)



2SA733AQ(Q101)

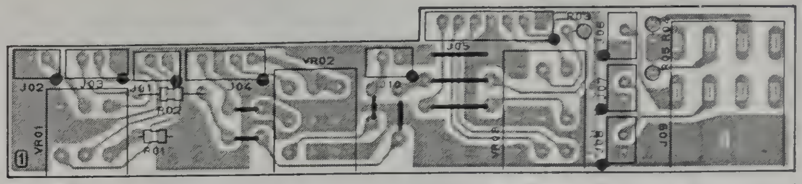


μPC7808H(Q1)
L7809(Q2,Q3)

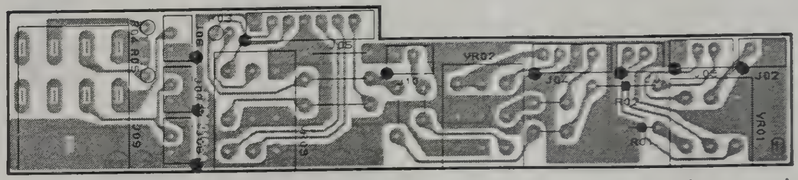


2SC3420GR(Q4)

VR-A UNIT (No. 4××)

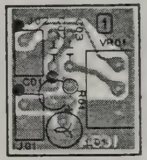


Component side (obverse)

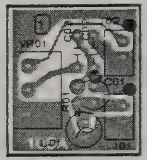


Component side (reverse)

VR-B UNIT (No. 5××)

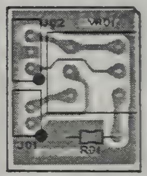


Component side (obverse)

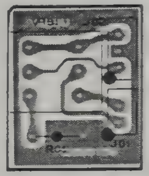


Component side (reverse)

VR-D UNIT (No. 9××)

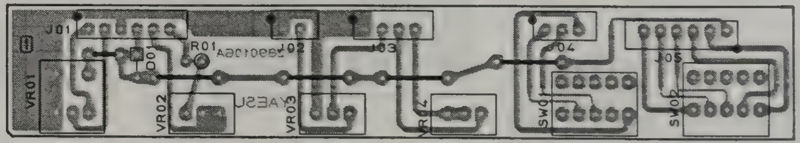


Component side (obverse)

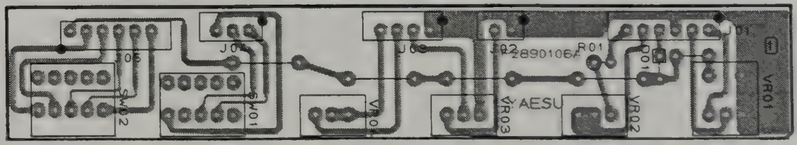


Component side (reverse)

VR-C UNIT (No. 2××)



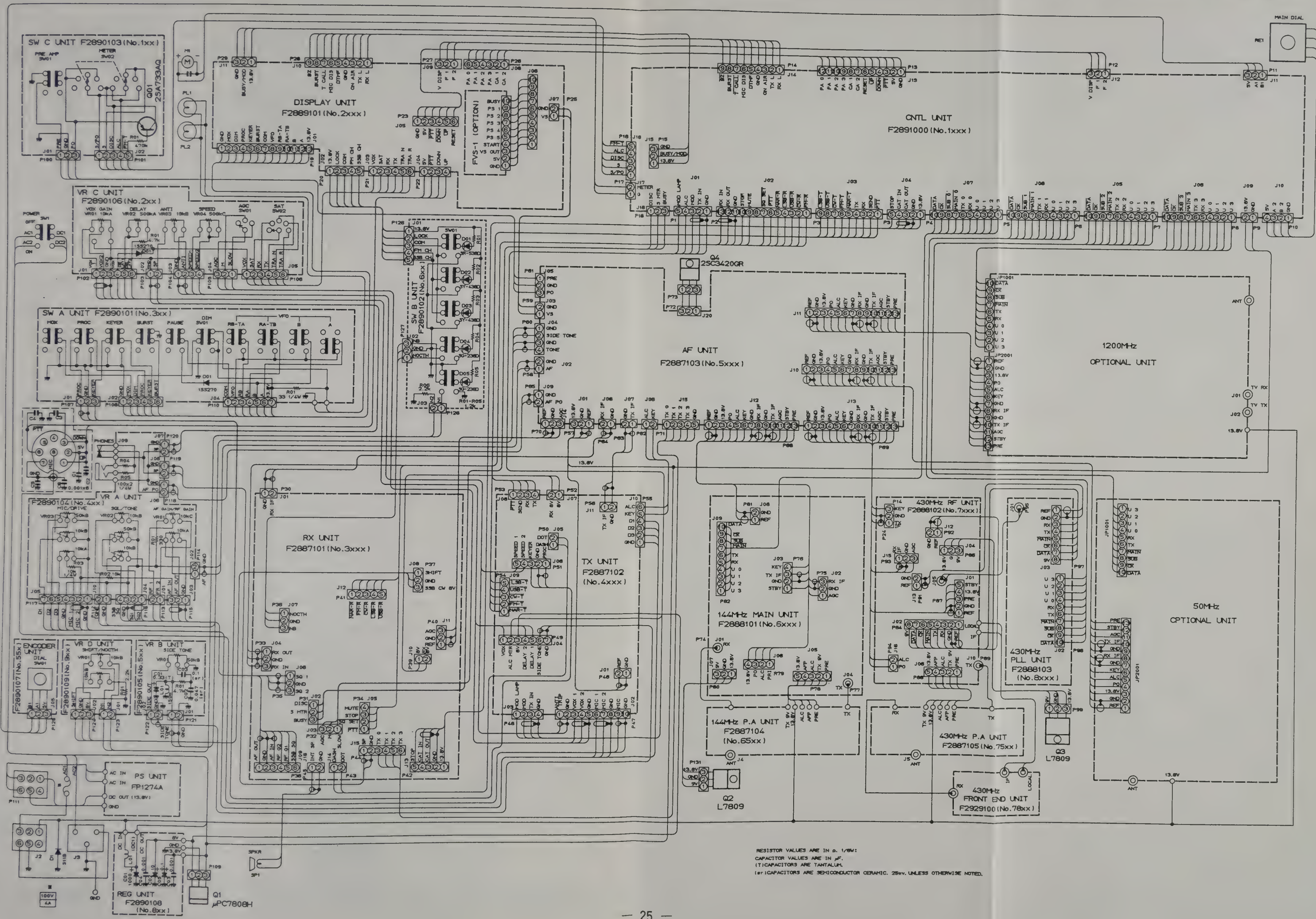
Component side (obverse)



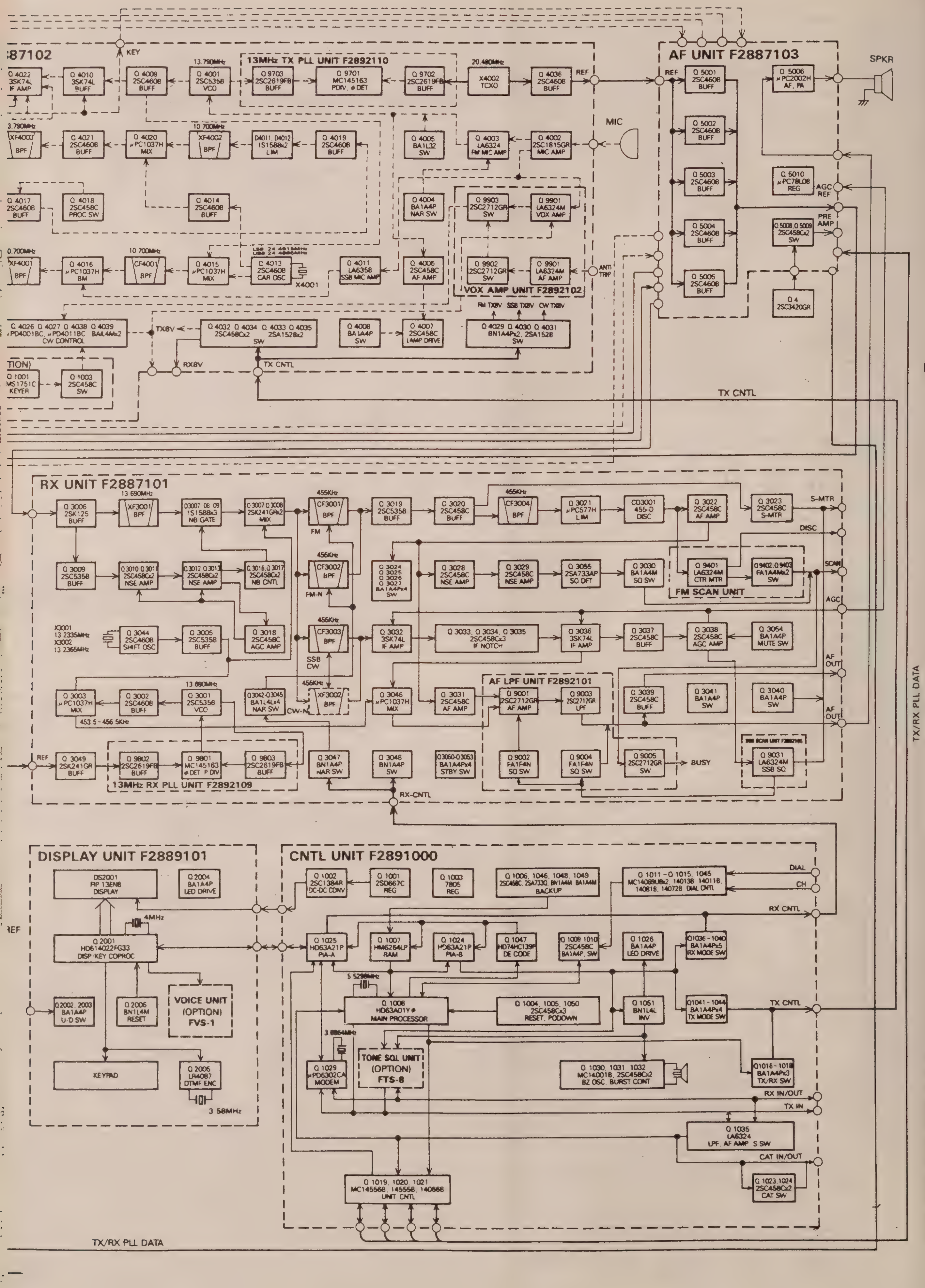
Component side (reverse)

※ Circuit Diagram is as shown page 25.

CONNECTION DIAGRAM

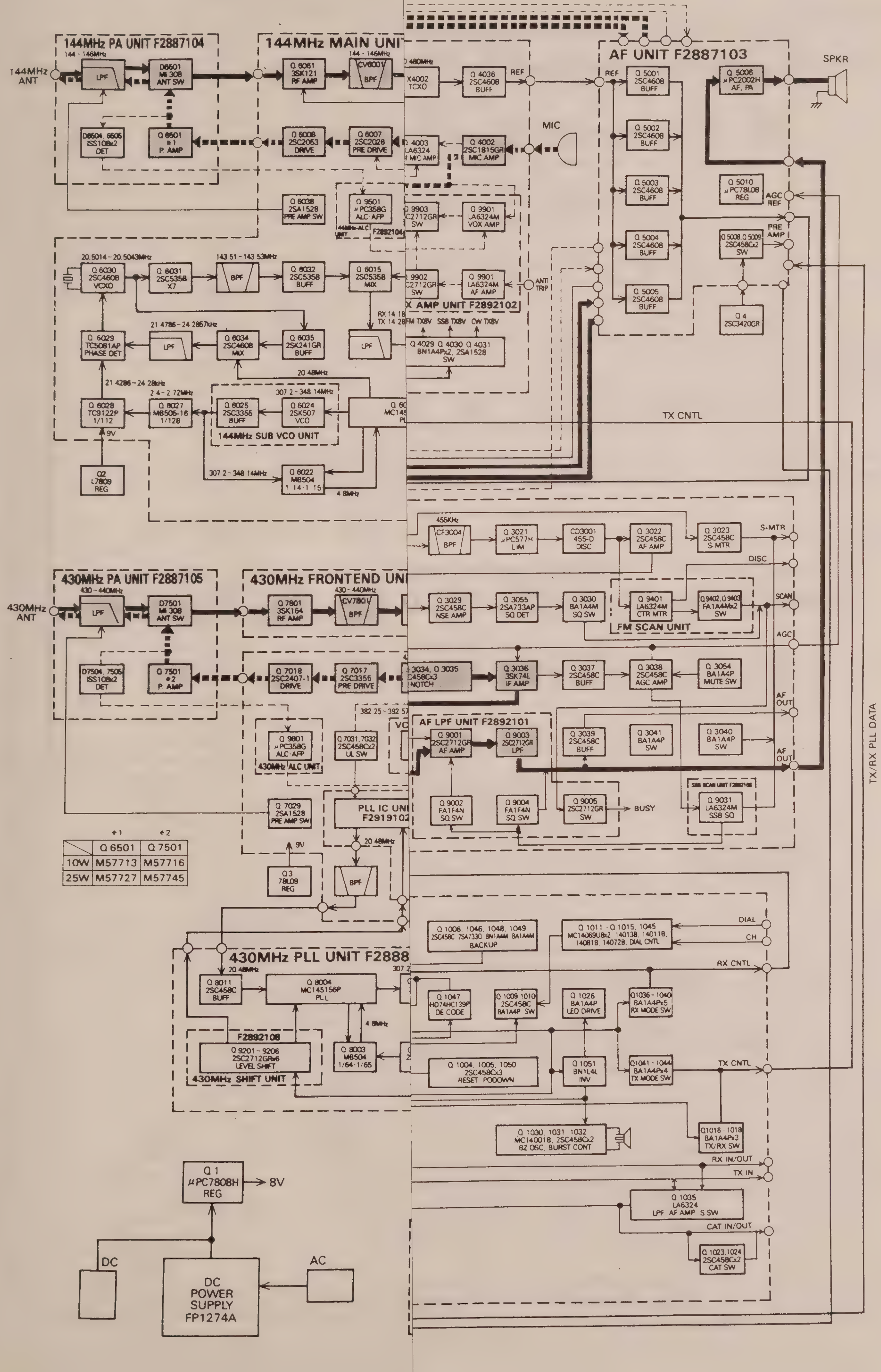

SW C UNIT F2890103(No.1xx)
PRE AMP SW01
METER SW02
Q01 2SA733AQ
DISPLAY UNIT F2889101(No.2xxx)
FVS-1 (OPTION)
CNTL UNIT F2891000(No.1xxx)
MAIN DIAL
RE1
VR C UNIT F2890106(No.2xx)
VOX GAIN VR01 10kA
DELAY VR02 500kA
ANTI VR03 10kB
SPEED VR04 500kC
AGC SW01
SAT SW02
POWER SW1
SW A UNIT F2890101(No.3xx)
MOX
PROC
KEYER
BURST
PAUSE
DIM SW01
RB-TA
RA-TB
VFO
B
A
SW B UNIT F2890102(No.6xx)
Q4 2SC3420GR
AF UNIT F2887103(No.5xxx)
1200MHz OPTIONAL UNIT
ANT
TV RX
TV TX
13.8V
F2890104(No.4xx) VR A UNIT
MIC/DRIVE
SQL/TONE
AF GAIN/RF GAIN
PHONES
RX UNIT F2887101(No.3xxx)
TX UNIT F2887102 (No.4xxx)
144MHz MAIN UNIT F2888101(No.6xxx)
430MHz RF UNIT F2888102(No.7xxx)
430MHz PLL UNIT F2888103 (No.8xxx)
50MHz OPTIONAL UNIT
ENCODER UNIT F2890107(No.55x)
DIAL SW01
VR D UNIT F2890109(No.9xx)
SHIFT/NOCTH
VR B UNIT F2890105(No.5xx)
SIDE TONE
144MHz P.A UNIT F2887104 (No.65xx)
430MHz P.A UNIT F2887105(No.75xx)
430MHz FRONT END UNIT F2929100(No.78xx)
Q2 L7809
Q3 L7809
PS UNIT FP1274A
AC IN
DC OUT (13.8V)
GND
REG UNIT F2890108 (No.8xx)
Q1 μPC7808H
SPKR SP1
PL1
PL2
M
100V 4A

RESISTOR VALUES ARE IN Ω. 1/6W:
CAPACITOR VALUES ARE IN μF.
(T)CAPACITORS ARE TANTALUM.
(er)CAPACITORS ARE SEMICONDUCTOR CERAMIC. 25wv. UNLESS OTHERWISE NOTED.



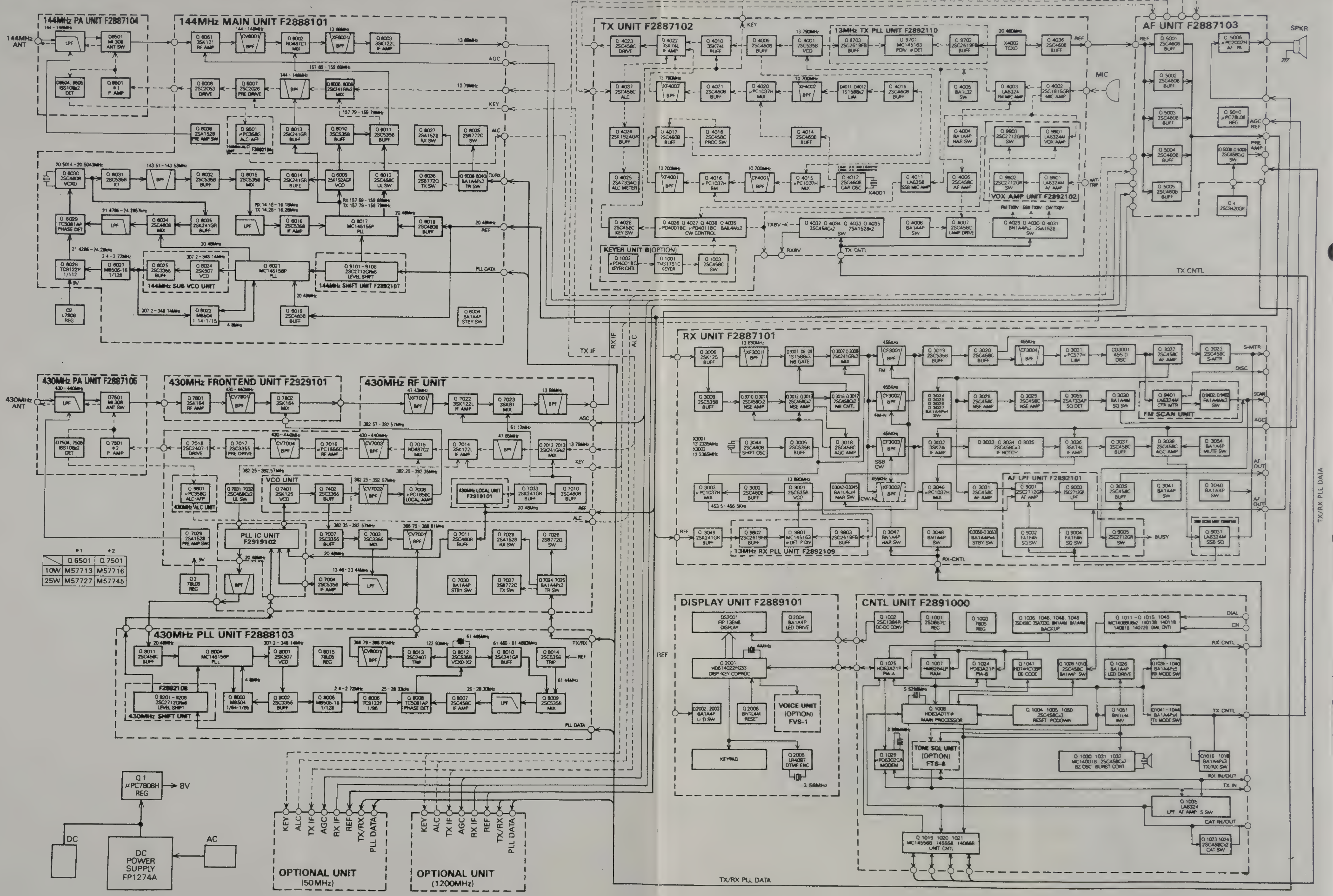
;87102
KEY
Q 4022 3SK74L IF AMP
Q 4010 3SK74L BUFF
Q 4009 2SC4608 BUFF
13.790MHz
Q 4001 2SC5358 VCO
13MHz TX PLL UNIT F2892110
Q 9703 2SC2619FB BUFF
Q 9701 MC145163 PDIV, ϕ DET
Q 9702 2SC2619FB BUFF
20.480MHz
X4002 TCXO
Q 4036 2SC4608 BUFF
REF
AF UNIT F2887103
REF
Q 5001 2SC4608 BUFF
Q 5006 μPC2002H AF, PA
SPKR
3.790MHz
XF4003 BPF
Q 4021 2SC4608 BUFF
Q 4020 μPC1037H MIX
10.700MHz
XF4002 BPF
D4011, D4012 1S1588x2 LIM
Q 4019 2SC4608 BUFF
Q 4005 BA1L3Z SW
Q 4003 LA6324 FM MIC AMP
Q 4002 2SC1815GR MIC AMP
MIC
Q 5002 2SC4608 BUFF
Q 4017 2SC4608 BUFF
Q 4018 2SC458C PROC SW
Q 4014 2SC4608 BUFF
Q 4004 BA1A4P NAR SW
Q 9903 2SC2712GR SW
Q 9901 LA6324M VOX AMP
Q 5003 2SC4608 BUFF
Q 5010 μPC78L08 REG
AGC REF
PRE AMP
Q 5004 2SC4608 BUFF
Q 5008, Q 5009 2SC458Cx2 SW
10.700MHz
XF4001 BPF
Q 4016 μPC1037H BM
10.700MHz
CF4001 BPF
Q 4015 μPC1037H MIX
LSB 24.4615MHz
USB 24.4585MHz
Q 4013 2SC4608 CAR OSC
X4001
Q 4011 LA6358 SSB MIC AMP
Q 4006 2SC458C AF AMP
Q 9902 2SC2712GR SW
Q 9901 LA6324M AF AMP
ANTI TRIP
VOX AMP UNIT F2892102
Q 5005 2SC4608 BUFF
Q 4 2SC3420GR
FM TX8V
SSB TX8V
CW TX8V
Q 4026 Q 4027 Q 4038 Q 4039 μPD4001BC, μPD4011BC BA1L4Mx2 CW CONTROL
TX8V
Q 4032 Q 4034 Q 4033 Q 4035 2SC458Cx2 2SA1528x2 SW
Q 4008 BA1A4P SW
Q 4007 2SC458C LAMP DRIVE
Q 4029 Q 4030 Q 4031 BN1A4Px2, 2SA1528 SW
TION)
Q 1001 MS1751C KEYER
Q 1003 2SC458C SW
RX8V
TX CNTL
TX CNTL
RX UNIT F2887101
13.690MHz
Q 3006 2SK125 BUFF
XF3001 BPF
Q3007 08 09 1S1588x3 NB GATE
Q 3007 Q 3008 2SK241GRx2 MIX
455KHz
CF3001 BPF
FM
Q 3019 2SC5358 BUFF
Q 3020 2SC458C BUFF
455KHz
CF3004 BPF
Q 3021 μPC577H LIM
CD3001 455-D DISC
Q 3022 2SC458C AF AMP
Q 3023 2SC458C S-MTR
S-MTR
DISC
Q 3009 2SC5358 BUFF
Q 3010 Q 3011 2SC458Cx2 NSE AMP
Q 3012 Q 3013 2SC458Cx2 NSE AMP
Q 3016 Q 3017 2SC458Cx2 NB CNTL
455KHz
CF3002 BPF
FM-N
Q 3024 Q 3025 Q 3026 Q 3027 BA1A4Px4 SW
Q 3028 2SC458C NSE AMP
Q 3029 2SC458C NSE AMP
Q 3055 2SA733AP SQ DET
Q 3030 BA1A4M SQ SW
Q 9401 LA6324M CTR MTR
Q 9402, Q 9403 FA1A4Mx2 SW
FM SCAN UNIT
SCAN
AGC
X3001 13.2335MHz
X3002 13.2365MHz
Q 3044 2SC4608 SHIFT OSC
Q 3005 2SC5358 BUFF
Q 3018 2SC458C AGC AMP
455KHz
CF3003 BPF
SSB CW
Q 3032 3SK74L IF AMP
Q 3033, Q 3034, Q 3035 2SC458Cx3 IF NOTCH
Q 3036 3SK74L IF AMP
Q 3037 2SC458C BUFF
Q 3038 2SC458C AGC AMP
Q 3054 BA1A4P MUTE SW
AF OUT
13.690MHz
Q 3003 μPC1037H MIX
Q 3002 2SC4608 BUFF
Q 3001 2SC5358 VCO
453.5 - 456.5KHz
Q3042-Q3045 BA1L4Lx4 NAR SW
455KHz
XF3002 BPF
CW-N
Q 3046 μPC1037H MIX
Q 3031 2SC458C AF AMP
AF LPF UNIT F2892101
Q 9001 2SC2712GR AF AMP
Q 9003 2SC2712GR LPF
Q 3039 2SC458C BUFF
Q 3041 BA1A4P SW
Q 3040 BA1A4P SW
AF OUT
SSB SCAN UNIT F2892108
REF
Q 3049 2SK241GR BUFF
Q 9802 2SC2619FB BUFF
Q 9801 MC145163 ϕ DET P DIV
Q 9803 2SC2619FB BUFF
13MHz RX PLL UNIT F2892109
Q 3047 BN1A4P NAR SW
Q 3048 BN1A4P SW
Q3050-Q3053 BA1A4Px4 STBY SW
Q 9002 FA1F4N SQ SW
Q 9004 FA1F4N SQ SW
Q 9005 2SC2712GR SW
BUSY
Q 9031 LA6324M SSB SQ
RX-CNTL
TX/RX PLL DATA
DISPLAY UNIT F2889101
DS2001 FIP 13EN8 DISPLAY
Q 2004 BA1A4P LED DRIVE
CNTL UNIT F2891000
Q 1002 2SC1384R DC-DC CONV
Q 1001 2SD667C REG
Q 1003 7805 REG
Q 1006, 1046, 1048, 1049 2SC458C, 2SA1330, BN1A4M, BA1A4M BACKUP
Q 1011 - Q 1015, 1045 MC14069UBx2, 14013B, 14011B, 14081B, 14072B DIAL CNTL
DIAL
CH
RX CNTL
4MHz
REF
Q 2001 HD614022FG33 DISP/KEY COPROC
Q 1025 HD63A21P PIA-A
Q 1007 HM6264LP RAM
Q 1024 HD63A21P PIA-B
Q 1047 HD74HC139P DE CODE
Q 1009 1010 2SC458C BA1A4P, SW
Q 1026 BA1A4P LED DRIVE
Q1036 - 1040 BA1A4Px5 RX MODE SW
5.5296MHz
Q 2002, 2003 BA1A4P U-D SW
Q 2006 BN1L4M RESET
VOICE UNIT (OPTION) FVS-1
Q 1008 HD63A01Y ϕ MAIN PROCESSOR
Q 1004, 1005, 1050 2SC458Cx3 RESET, PODOWN
Q 1051 BN1L4L INV
Q1041 - 1044 BA1A4Px4 TX MODE SW
TX CNTL
3.6864MHz
KEYPAD
Q 2005 LR4087 DTMF ENC
3.58MHz
Q 1029 μPD6302CA MODEM
TONE SQL UNIT (OPTION) FTS-8
Q 1030, 1031, 1032 MC14001B, 2SC458Cx2 BZ OSC, BURST CONT
Q1016 - 1018 BA1A4Px3 TX/RX SW
RX IN/OUT
TX IN
Q 1035 LA6324 LPF, AF AMP, S SW
CAT IN/OUT
Q 1019, 1020, 1021 MC145568, 145558, 140668 UNIT CNTL
Q 1023, 1024 2SC458Cx2 CAT SW
TX/RX PLL DATA

ACING (SSB MODE)



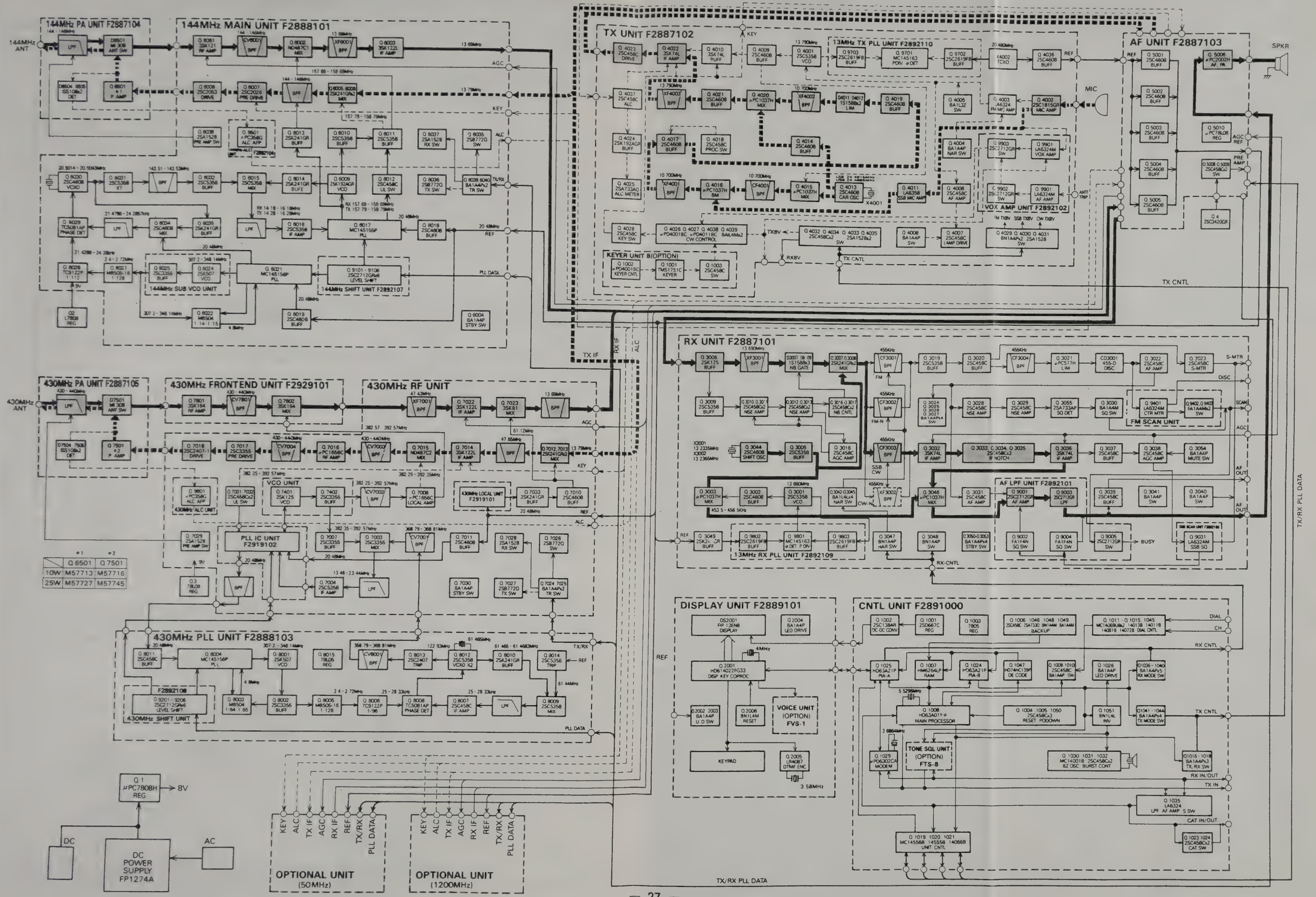
	*1 Q 6501	*2 Q 7501
10W	M57713	M57716
25W	M57727	M57745

BLOCK DIAGRAM

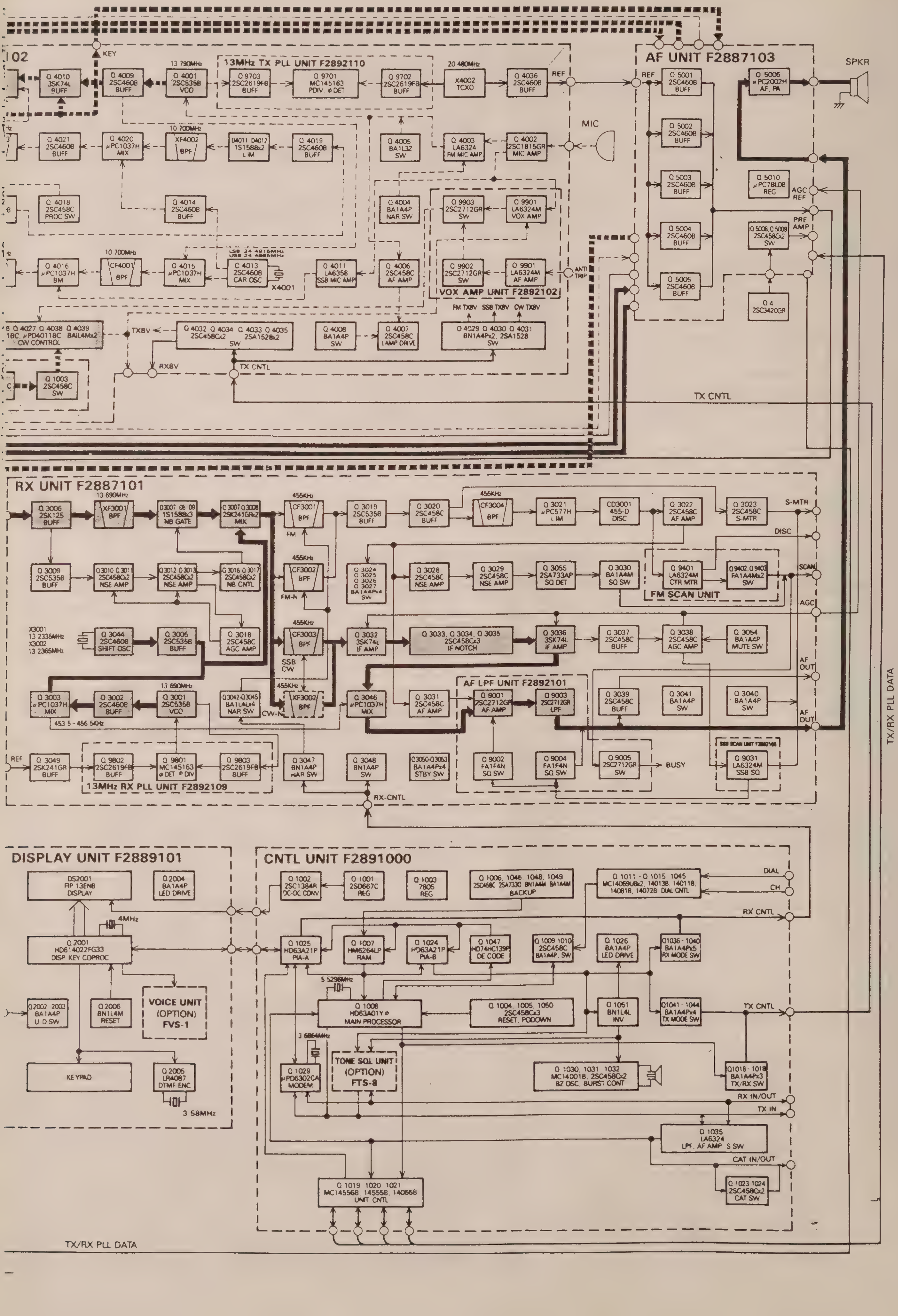


	⊕1	⊕2
	Q 6501	Q 7501
10W	M57713	M57716
25W	M57727	M57745

SIGNAL TRACING (SSB MODE)

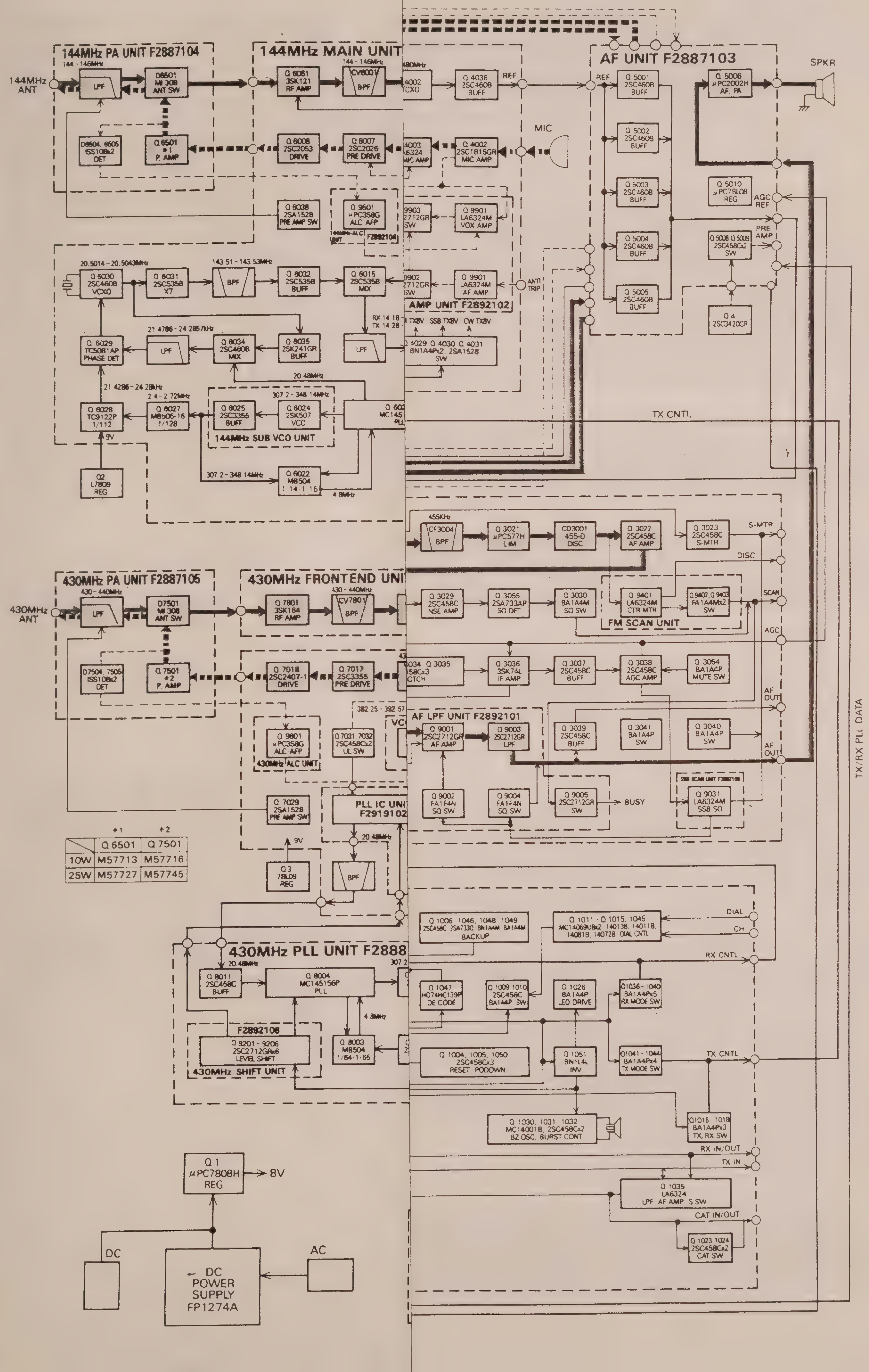


	Q 6501 ⁎1	Q 7501 ⁎2
10W	M57713	M57716
25W	M57727	M57745



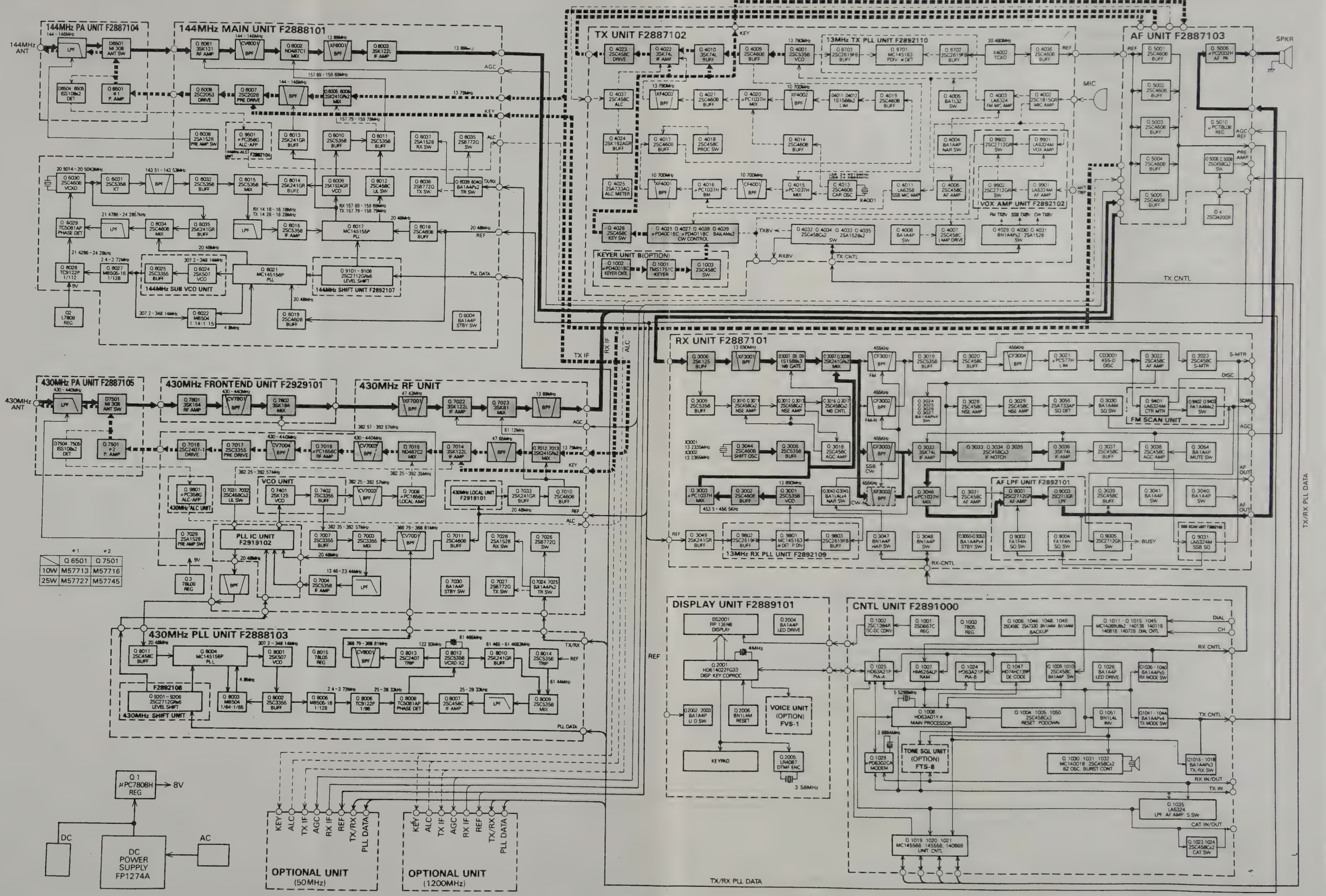
102
KEY
Q 4010 3SK74L BUFF
Q 4009 2SC4608 BUFF
13 790MHz
Q 4001 2SC5358 VCO
13MHz TX PLL UNIT F2892110
Q 9703 2SC2619FB BUFF
Q 9701 MC145163 PDIV, φ DET
Q 9702 2SC2619FB BUFF
20 480MHz
X4002 TCXO
Q 4036 2SC4608 BUFF
REF
Q 4021 2SC4608 BUFF
Q 4020 μPC1037H MIX
10 700MHz
XF4002 BPF
D4011 D4012 1S1588x2 LIM
Q 4019 2SC4608 BUFF
Q 4005 BA1L3Z SW
Q 4003 LA6324 FM MIC AMP
Q 4002 2SC1815GR MIC AMP
MIC
Q 4018 2SC458C PROC SW
Q 4014 2SC4608 BUFF
Q 4004 BA1A4P NAR SW
Q 9903 2SC2712GR SW
Q 9901 LA6324M VOX AMP
10 700MHz
Q 4016 μPC1037H BM
CF4001 BPF
Q 4015 μPC1037H MIX
LSB 24 4815MHz
USB 24 4885MHz
Q 4013 2SC4608 CAR OSC
X4001
Q 4011 LA6358 SSB MIC AMP
Q 4006 2SC458C AF AMP
Q 9902 2SC2712GR SW
Q 9901 LA6324M AF AMP
ANTI TRIP
VOX AMP UNIT F2892102
6 Q 4027 Q 4038 Q 4039
1BC μPD4011BC BA1L4Mx2
CW CONTROL
TX8V
Q 4032 Q 4034 Q 4033 Q 4035
2SC458Cx2 2SA1528x2
SW
Q 4008 BA1A4P SW
Q 4007 2SC458C LAMP DRIVE
FM TX8V SSB TX8V CW TX8V
Q 4029 Q 4030 Q 4031
BN1A4Px2, 2SA1528
SW
RX8V
TX CNTL
Q 1003 2SC458C SW
AF UNIT F2887103
REF
Q 5001 2SC4608 BUFF
Q 5002 2SC4608 BUFF
Q 5003 2SC4608 BUFF
Q 5004 2SC4608 BUFF
Q 5005 2SC4608 BUFF
Q 5006 μPC2002H AF, PA
SPKR
Q 5010 μPC78L08 REG
AGC REF
PRE AMP
Q 5008, Q 5009 2SC458Cx2 SW
Q 4 2SC3420GR
TX CNTL
RX UNIT F2887101
13 690MHz
Q 3006 2SK125 BUFF
XF3001 BPF
D3007 08 09 1S1588x3 NB GATE
Q 3007 Q 3008 2SK241GRx2 MIX
455KHz
CF3001 BPF
FM
Q 3019 2SC5358 BUFF
Q 3020 2SC458C BUFF
455KHz
CF3004 BPF
Q 3021 μPC577H LIM
CD3001 455-D DISC
Q 3022 2SC458C AF AMP
Q 3023 2SC458C S-MTR
S-MTR
DISC
Q 3009 2SC5358 BUFF
Q 3010 Q 3011 2SC458Cx2 NSE AMP
Q 3012 Q 3013 2SC458Cx2 NSE AMP
Q 3016 Q 3017 2SC458Cx2 NB CNTL
455KHz
CF3002 BPF
FM-N
Q 3024 Q 3025 Q 3026 Q 3027 BA1A4Px4 SW
Q 3028 2SC458C NSE AMP
Q 3029 2SC458C NSE AMP
Q 3055 2SA733AP SQ DET
Q 3030 BA1A4M SQ SW
Q 9401 LA6324M CTR MTR
Q 9402, Q 9403 FA1A4Mx2 SW
FM SCAN UNIT
SCAN
AGC
X3001 13 2335MHz
X3002 13 2365MHz
Q 3044 2SC4608 SHIFT OSC
Q 3005 2SC5358 BUFF
Q 3018 2SC458C AGC AMP
455KHz
CF3003 BPF
SSB CW
Q 3032 3SK74L IF AMP
Q 3033, Q 3034, Q 3035 2SC458Cx3 IF NOTCH
Q 3036 3SK74L IF AMP
Q 3037 2SC458C BUFF
Q 3038 2SC458C AGC AMP
Q 3054 BA1A4P MUTE SW
AF OUT
13 690MHz
Q 3003 μPC1037H MIX
Q 3002 2SC4608 BUFF
Q 3001 2SC5358 VCO
Q3042-Q3045 BA1L4Lx4 NAR SW
455KHz
XF3002 BPF
CW-N
Q 3046 μPC1037H MIX
Q 3031 2SC458C AF AMP
AF LPF UNIT F2892101
Q 9001 2SC2712GR AF AMP
Q 9003 2SC2712GR LPF
Q 3039 2SC458C BUFF
Q 3041 BA1A4P SW
Q 3040 BA1A4P SW
AF OUT
453 5 - 456 5KHz
REF
Q 3049 2SK241GR BUFF
Q 9802 2SC2619FB BUFF
Q 9801 MC145163 φ DET P DIV
Q 9803 2SC2619FB BUFF
13MHz RX PLL UNIT F2892109
Q 3047 BN1A4P NAR SW
Q 3048 BN1A4P SW
Q3050-Q3053 BA1A4Px4 STBY SW
Q 9002 FA1F4N SQ SW
Q 9004 FA1F4N SQ SW
Q 9005 2SC2712GR SW
BUSY
SSB SCAN UNIT F2892105
Q 9031 LA6324M SSB SQ
RX-CNTL
DISPLAY UNIT F2889101
DS2001 FIP 13ENB DISPLAY
Q 2004 BA1A4P LED DRIVE
4MHz
Q 2001 HD614022FG33 DISP KEY COPROC
Q 2002 2003 BA1A4P U D SW
Q 2006 BN1L4M RESET
VOICE UNIT (OPTION) FVS-1
KEYPAD
Q 2005 LR4087 DTMF ENC
3 58MHz
CNTL UNIT F2891000
Q 1002 2SC1384R DC-DC CONV
Q 1001 2SD667C REG
Q 1003 7805 REG
Q 1006, 1046, 1048, 1049
2SC458C 2SA733Q BN1A4M BA1A4M
BACKUP
Q 1011 - Q 1015 1045
MC14069UBx2, 14013B, 14011B, 14081B, 14072B, DIAL CNTL
DIAL
CH
RX CNTL
Q 1025 HD63A21P PIA-A
Q 1007 HM6264LP RAM
Q 1024 HD63A21P PIA-B
Q 1047 HD74HC139P DE CODE
Q 1009 1010 2SC458C BA1A4P, SW
Q 1026 BA1A4P LED DRIVE
Q1036 - 1040 BA1A4Px5 RX MODE SW
5 5296MHz
Q 1008 HD63A01Y φ MAIN PROCESSOR
Q 1004, 1005, 1050 2SC458Cx3 RESET, PODOWN
Q 1051 BN1L4L INV
Q1041 - 1044 BA1A4Px4 TX MODE SW
TX CNTL
3 6864MHz
Q 1029 μPD6302CA MODEM
TONE SQL UNIT (OPTION) FTS-8
Q 1030, 1031, 1032 MC14001B, 2SC458Cx2 BZ OSC, BURST CONT
Q1016 - 1018 BA1A4Px3 TX/RX SW
RX IN/OUT
TX IN
Q 1035 LA6324 LPF, AF AMP S SW
CAT IN/OUT
Q 1023 1024 2SC458Cx2 CAT SW
Q 1019 1020 1021 MC145568, 145558, 140668 UNIT CNTL
TX/RX PLL DATA
TX/RX PLL DATA

RACING (FM MODE)



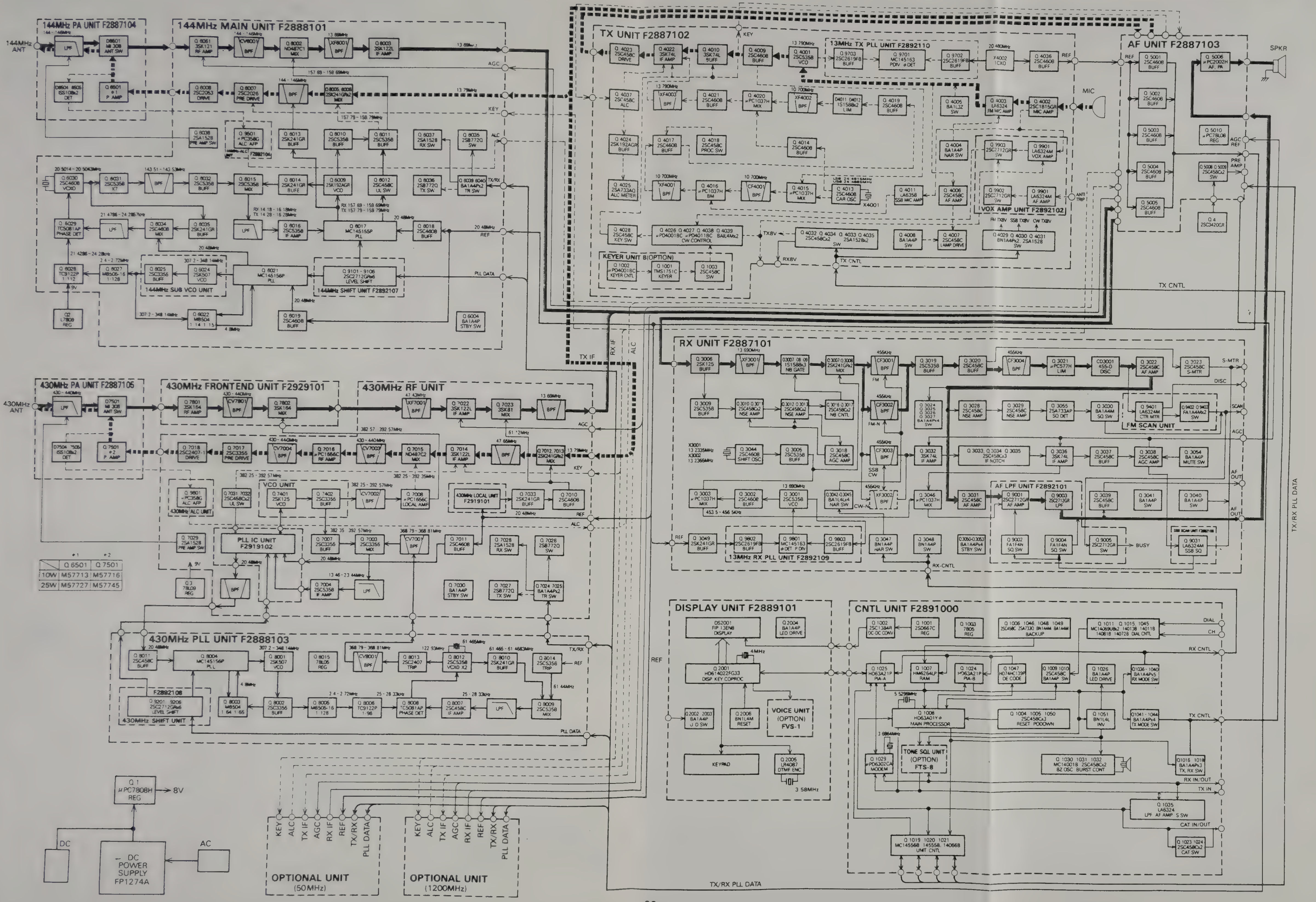
	*1 Q 6501	*2 Q 7501
10W	M57713	M57716
25W	M57727	M57745

SIGNAL TRACING (CW MODE)



	Q 6501	Q 7501
	◆1	◆2
10W	M57713	M57716
25W	M57727	M57745

SIGNAL TRACING (FM MODE)



	Q 6501	Q 7501
	*1	*2
10W	M57713	M57716
25W	M57727	M57745

:NT	REPLACEMENT	REPLACEMENT
	Part No.	Part No.

:NT	REPLACEMENT	REPLACEMENT
	Part No.	Part No

ENT	REPLACEMENT	REPLACEMENT
	Part No.	Part No.

:NT	REPLACEMENT	REPLACEMENT
	Part No.	Part No.
7	2SC2812 L6/L7	2SC2462 LC/LD
	G3328127 F/G	G3324627 C/D

NT	REPLACEMENT	REPLACEMENT
	Part No.	Part No.

NT	REPLACEMENT	REPLACEMENT
	Part No.	Part No.

NT	REPLACEMENT	REPLACEMENT
	Part No.	Part No.

NT	REPLACEMENT	REPLACEMENT
	Part No	Part No.
7	2SC2812 L6/L7	2SC2462 LC/LD
	S3328127 F/G	G3324627 C/D

◎ CNTL UNIT

Symbol No.	ORIGINAL	REPLACEMENT	REPLACEMENT	REPLACEMENT
	Part No.	Part No.	Part No.	Part No.
Q1004,1005,1006,1009, 1002,1023,1050	2SC458C	2SC945AP		
	G33045800	G3309451P		
Q1002	2SC1384R	2SD667C		
	G3313840R	G306670C		
Q1049	BA1A4M	2SC3402		
	G3090074	G3334020		
Q1048	BN1A4M	2SA1348		
	G3090081	G3113480		
Q1007	HM6264ALP-12	HM6264ALP-15	HM6264LP	HM6264ALP-10
	G1090878	G1090879	G1090791	G1090880
Q1035	LA6324	μPC324C	M5224P	
	G1090646	G1090230	G1090757	
Q1030	MC14001BCP	μPD4001-BC		
	G1090027	G1090278		
Q1014	MC14011BCP	μPD4011BC		
	G1090068	G1090282		
Q1013	MC14013BCP	μPD4013BC		
	G1090067	G1090280		
Q1021	MC14066BCP	μPD4066BC		
	G1090257	G1090283		
Q1015	MC14081BCP	μPD4081BC		
	G1090053	G1090658		
Q1003	μPC7805H	L7805		
	G1090299	G1090776		
D1005,1006,1007,1008, 1009,1010,1011,1012	1SS270	1SS53		
	G2090408	G2090027		

◎ DISPLAY UNIT

Symbol No.	ORIGINAL	REPLACEMENT	REPLACEMENT	REPLACEMENT
	Part No.	Part No.	Part No.	Part No.
Q2006	BN1L4M	2SA1345		
	G3090084	G3113450		
Q2010	1SS270	1SS53		
	G2090408	G2090027		

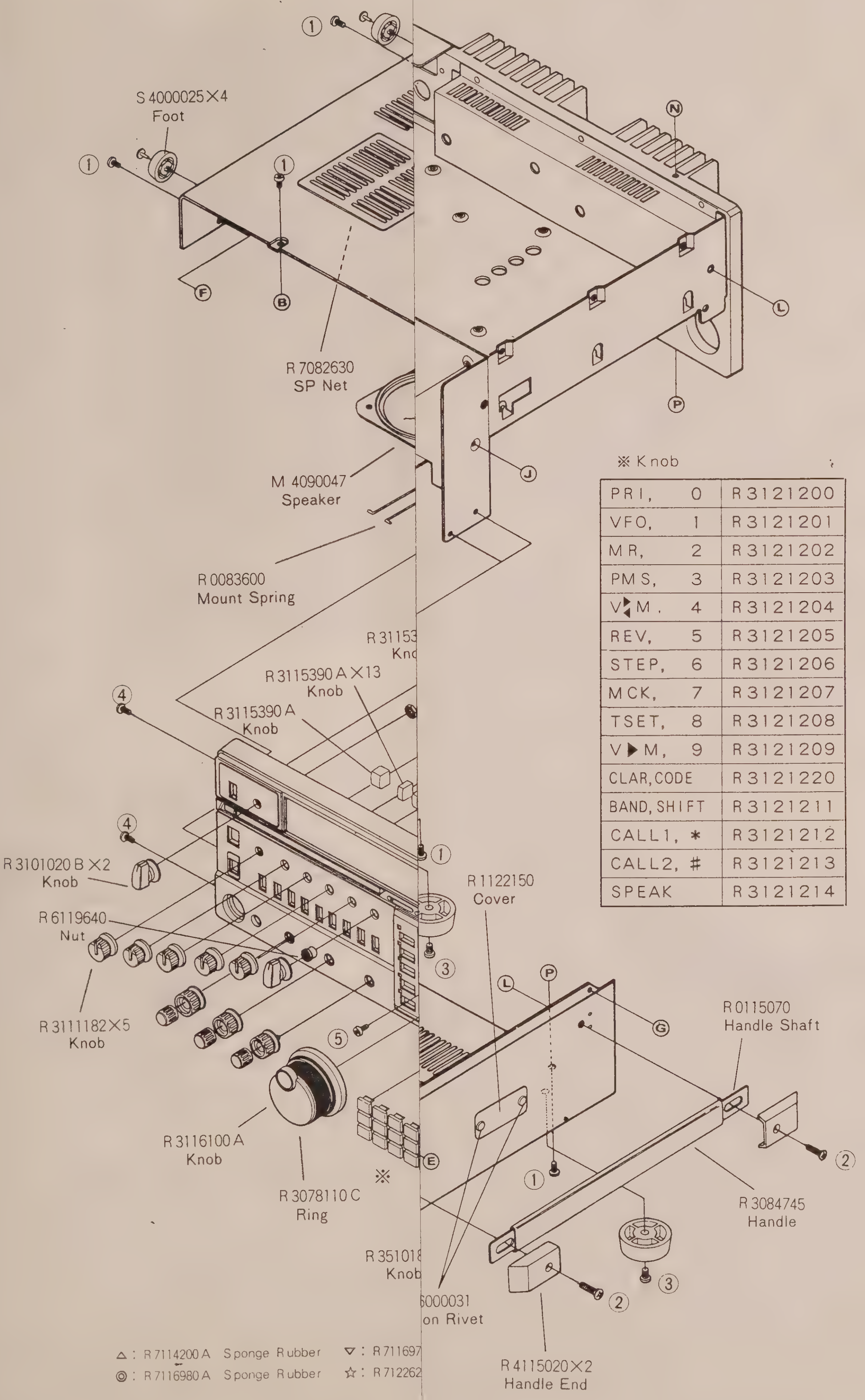
◎ VR C UNIT

Symbol No.	ORIGINAL	REPLACEMENT	REPLACEMENT	REPLACEMENT
	Part No.	Part No.	Part No.	Part No.
D201	1SS270	1SS53		
	G2090408	G2090027		

◎ SW A UNIT

Symbol No.	ORIGINAL	REPLACEMENT	REPLACEMENT	REPLACEMENT
	Part No.	Part No.	Part No.	Part No.
D301	1SS270	1SS53		
	G2090408	G2090027		

EXPLODED VIEW



※ Knob

PRI, 0	R3121200
VFO, 1	R3121201
MR, 2	R3121202
PMS, 3	R3121203
V▶◀M, 4	R3121204
REV, 5	R3121205
STEP, 6	R3121206
MCK, 7	R3121207
TSET, 8	R3121208
V▶M, 9	R3121209
CLAR, CODE	R3121220
BAND, SHIFT	R3121211
CALL1, ＊	R3121212
CALL2, #	R3121213
SPEAK	R3121214

△ : R7114200A Sponge Rubber ▽ : R711697
◎ : R7116980A Sponge Rubber ☆ : R712262

SEMICONDUCTOR CROSS-REFERENCE

◎ MAIN CHASSIS

Symbol No.	ORIGINAL	REPLACEMENT	REPLACEMENT	REPLACEMENT
	Part No.	Part No.	Part No.	Part No.
Q4	2SC3420GR	2SD1667		
	G3334200G	G3416670		
Q1	μPC7808H	L7808		
	G1090294	G1090777		

◎ RX UNIT

Symbol No.	ORIGINAL	REPLACEMENT	REPLACEMENT	REPLACEMENT
	Part No.	Part No.	Part No.	Part No.
Q3030	BA1A4M	2SC3402		
	G3090074	G3334020		
D3005,3006,3028,3030,3034,3035,3037,3038,3039,3040,3041,3042,3043,3044,3045,3046,3047,3049,3050,3051,3052	1SS270	1SS53		
	G2090408	G2090027		
D3036,3048	1SS270TJ	1SS53T1		
	G2060004	G2060002		

◎ AF LPF UNIT

Symbol No.	ORIGINAL	REPLACEMENT	REPLACEMENT	REPLACEMENT
	Part No.	Part No.	Part No.	Part No.
Q9001,9002,9003,9004,9005	2SC2712GR TE85R	2SC1623 L6/L7	2SC2812 L6/L7	2SC2462 LC/LD
	G3327127G	G3316237 F/G	G3328127 F/G	G3324627 C/D

◎ FM SCAN UNIT

Symbol No.	ORIGINAL	REPLACEMENT	REPLACEMENT	REPLACEMENT
	Part No.	Part No.	Part No.	Part No.
D9401	1SS184 TE85R	DCB015-TA	MC2838-T14-2	
	G2070009	G2070012	G2070018	

◎ SSB SCAN UNIT

Symbol No.	ORIGINAL	REPLACEMENT	REPLACEMENT	REPLACEMENT
	Part No.	Part No.	Part No.	Part No.
D9301	1SS184 TE85R	DCB015-TA	MC2838-T14-2	
	G2070009	G2070012	G2070018	

◎ TX UNIT

Symbol No.	ORIGINAL	REPLACEMENT	REPLACEMENT	REPLACEMENT
	Part No.	Part No.	Part No.	Part No.
Q4032,4034	2SC458C	2SC945AP		
	G3304580C	G3309451P		
Q4005	BA1L3Z	2SC3901		
	G3090077	G3339010		
Q4038,4039	BA1L4M	2SC3399		
	G3090080	G3333990		
Q4003	LA6324	μPC324C	M5224P	
	G1090646	G1090230	G1090757	
Q4026	μPD4001BC	MC14001BCP		
	G1090278	G1090027		
Q4027	μPD4011BC	MC14011BCP		
	G1090282	G1090068		
D4003,4004,4006,4007,4008,4014,4017,4018,4019,4022	1SS270	1SS53		
	G2090408	G2090027		
D4023	1SS270TJ	1SS53T1		
	G2060004	G2060002		

◎ VOX UNIT

Symbol No.	ORIGINAL	REPLACEMENT	REPLACEMENT	REPLACEMENT
	Part No.	Part No	Part No.	Part No.
Q9902,9903	2SC2712GR TE85R	2SC1623 L6/L7	2SC2812 L6/L7	2SC2462 LC/LD
	G3327127G	G3316237 F/G	G3328127 F/G	G3324627 C/D

◎ AF UNIT

Symbol No.	ORIGINAL	REPLACEMENT	REPLACEMENT	REPLACEMENT
	Part No.	Part No.	Part No.	Part No.
Q5008,5009	2SC458C	2SC945AP		
	G3304580C	G3309451P		

◎ 144MHz MAIN UNIT

Symbol No.	ORIGINAL	REPLACEMENT	REPLACEMENT	REPLACEMENT
	Part No.	Part No.	Part No.	Part No
Q6035,6036	2SB772Q	2SA715C		
	G32077200	G3107150C		
Q6012	2SC458C	2SC945AP		
	G3304580C	G3309451P		
D6001,6014,6019,6020,6021,6022,6023,6024,6025,6026,6027,6028,6029,6030,6031	1SS270	1SS53		
	G2090408	G2090027		
D6032	1SS270TJ	1SS53T1		
	G2060004	G2060004		

◎ 144MHz ALC UNIT

Symbol No.	ORIGINAL	REPLACEMENT	REPLACEMENT	REPLACEMENT
	Part No.	Part No.	Part No.	Part No.
D9501,9502	1SS181 TE85R	MC2838-T14-2		
	G2070001	G2070024		

◎ 144MHz SHIFT UNIT

Symbol No.	ORIGINAL	REPLACEMENT	REPLACEMENT	REPLACEMENT
	Part No.	Part No.	Part No.	Part No.
Q9101,9102,9103,9104,9105,9106	2SC2712GR TE85R	2SC1623 L6/L7	2SC2812 L6/L7	2SC2462 LC/LD
	G3327127G	G3316237 F/G	G3328127 F/G	G3324627 C/D

◎ 430MHz RF UNIT

Symbol No.	ORIGINAL	REPLACEMENT	REPLACEMENT	REPLACEMENT
	Part No.	Part No.	Part No.	Part No.
Q7026,7027	2SB772Q	2SA715C		
	G32077200	G3107150C		
Q7031,7032	2SC458C	2SC945AP		
	G3304580C	G3309451P		
D7003,7014,7015,7016,7017,7018	1SS270	1SS53		
	G2090408	G2090027		
D7006,7011	1SS270TJ	1SS53T1		
	G2060004	G2060002		

◎ 430MHz ALC UNIT

Symbol No.	ORIGINAL	REPLACEMENT	REPLACEMENT	REPLACEMENT
	Part No.	Part No.	Part No.	Part No.
D9601,9602	1SS181 TE85R	MC2836-T14-2		
	G2070001	G2070024		

◎ 430MHz PLL UNIT

Symbol No.	ORIGINAL	REPLACEMENT	REPLACEMENT	REPLACEMENT
	Part No.	Part No.	Part No.	Part No.
D8004,8005,8006,8007,8008,8009,8010,8011	1SS270	1SS53		
	G2090408	G2090027		

◎ 430MHz SHIFT UNIT

Symbol No.	ORIGINAL	REPLACEMENT	REPLACEMENT	REPLACEMENT
	Part No.	Part No.	Part No	Part No.
Q9201,9202,9203,9204,9205,9206	2SC2712GR TE85R	2SC1623 L6/L7	2SC2812 L6/L7	2SC2462 LC/LD
	G3327127G	G3316237 F/G	S3328127 F/G	G3324627 C/D

◎ CNTL UNIT

Symbol No.	ORIGINAL	REPLACEMENT	REPLACEMENT	REPLACEMENT
	Part No.	Part No.	Part No.	Part No.
Q1004,1005,1006,1009,1002,1023,1050	2SC458C	2SC945AP		
	G3304580C	G3309451P		
Q1002	2SC1384R	2SD667C		
	G3313840R	G306670C		
Q1049	BA1A4M	2SC3402		
	G3090074	G3334020		
Q1048	BN1A4M	2SA1348		
	G3090081	G3113480		
Q1007	HM6264ALP-12	HM6264ALP-15	HM6264LP	HM6264ALP-10
	G1090878	G1090879	G1090791	G1090880
Q1035	LA6324	μPC324C	M5224P	
	G1090646	G1090230	G1090757	
Q1030	MC14001BCP	μPD4001-BC		
	G1090027	G1090278		
Q1014	MC14011BCP	μPD4011BC		
	G1090068	G1090282		
Q1013	MC14013BCP	μPD4013BC		
	G1090067	G1090280		
Q1021	MC14066BCP	μPD4066BC		
	G1090257	G1090283		
Q1015	MC14081BCP	μPD4081BC		
	G1090053	G1090658		
Q1003	μPC7805H	L7805		
	G1090299	G1090776		
D1005,1006,1007,1008,1009,1010,1011,1012	1SS270	1SS53		
	G2090408	G2090027		

◎ DISPLAY UNIT

Symbol No.	ORIGINAL	REPLACEMENT	REPLACEMENT	REPLACEMENT
	Part No.	Part No.	Part No.	Part No.
Q2006	BN1L4M	2SA1345		
	G3090084	G3113450		
Q2010	1SS270	1SS53		
	G2090408	G2090027		

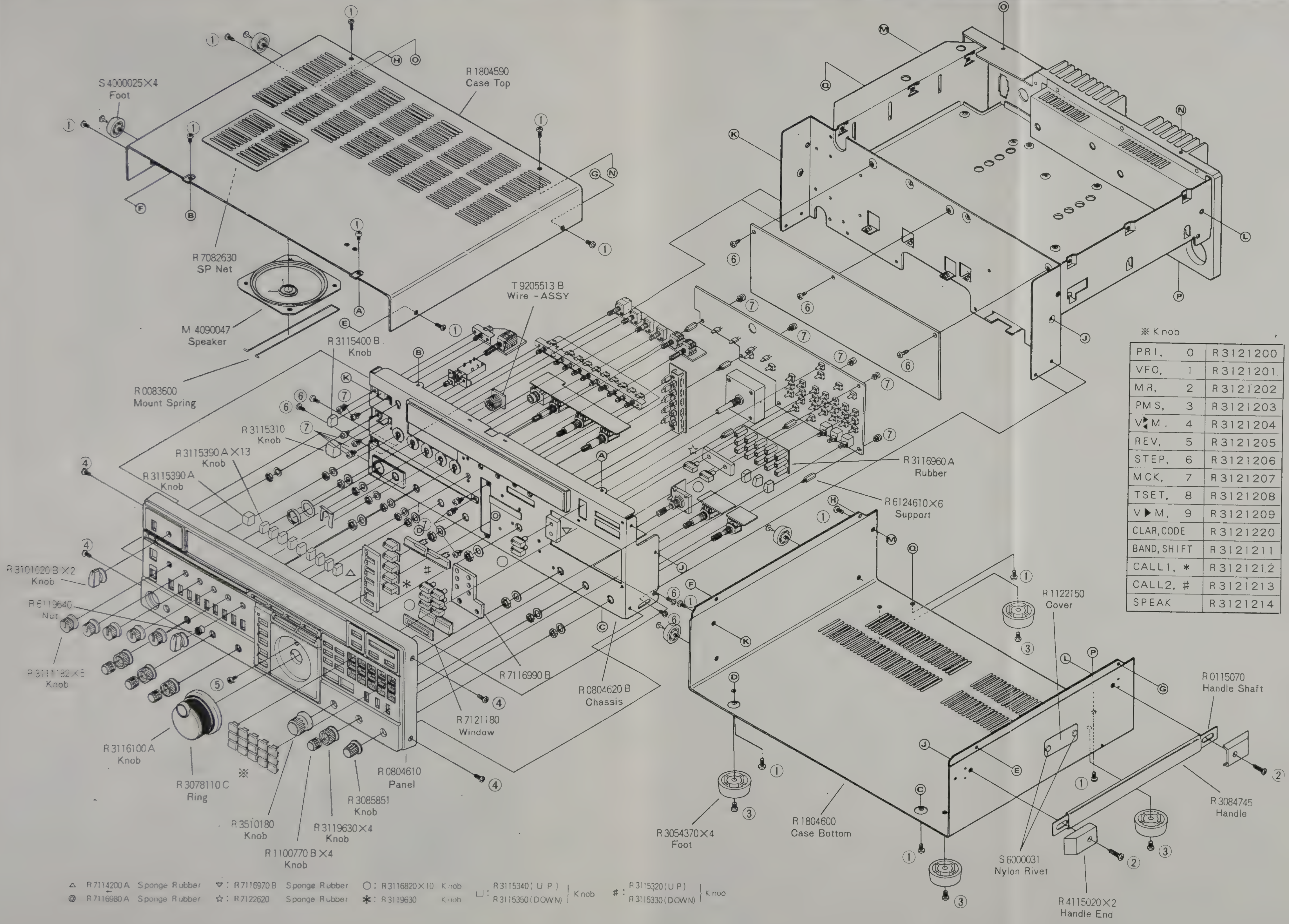
◎ VR C UNIT

Symbol No.	ORIGINAL	REPLACEMENT	REPLACEMENT	REPLACEMENT
	Part No.	Part No.	Part No.	Part No.
D201	1SS270	1SS53		
	G2090408	G2090027		

◎ SW A UNIT

Symbol No.	ORIGINAL	REPLACEMENT	REPLACEMENT	REPLACEMENT
	Part No.	Part No.	Part No.	Part No.
D301	1SS270	1SS53		
	G2090408	G2090027		

EXPLODED VIEW



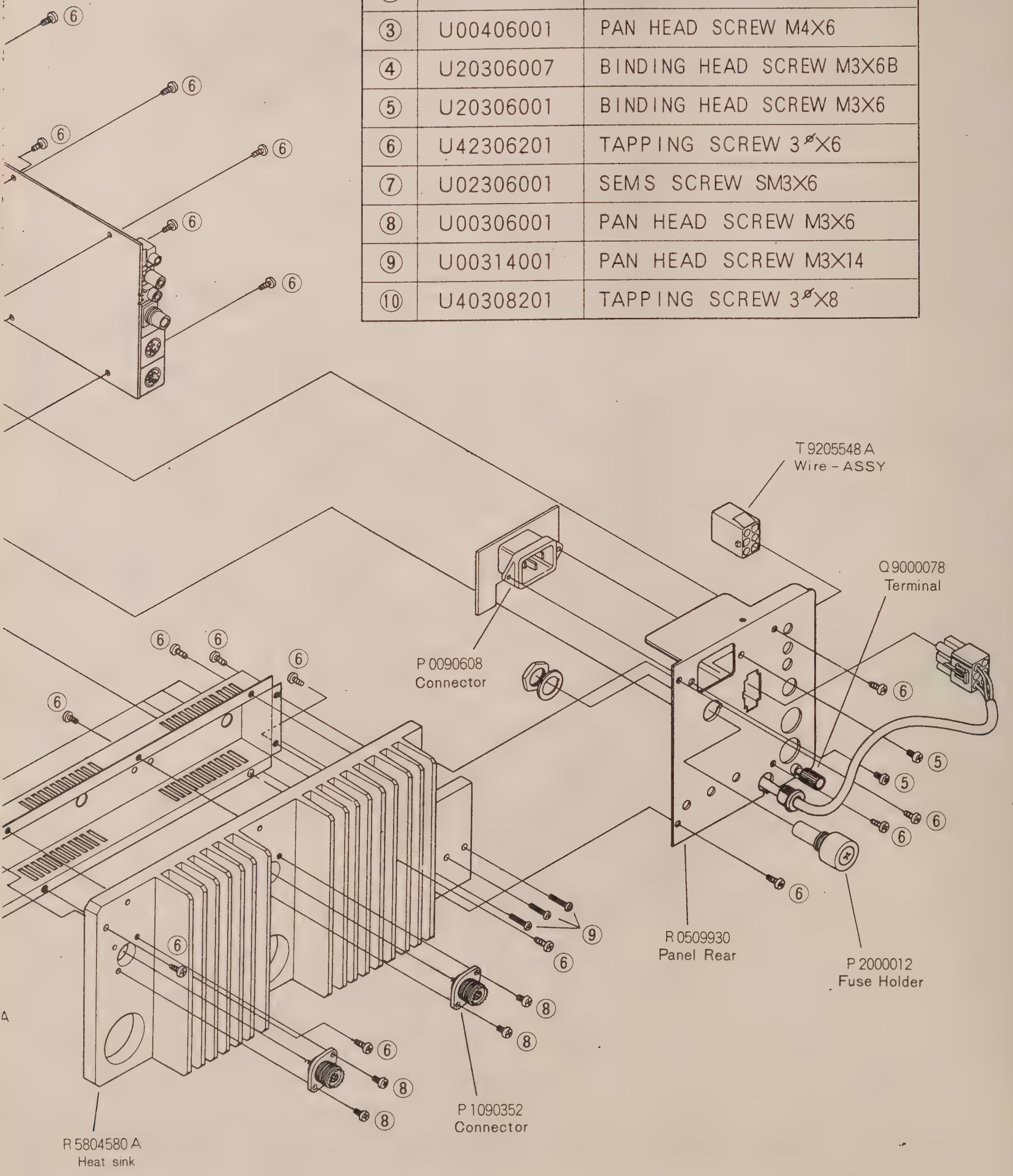
※ Knob

PRI, 0	R 3121200
VFO, 1	R 3121201
MR, 2	R 3121202
PMS, 3	R 3121203
V◀M, 4	R 3121204
REV, 5	R 3121205
STEP, 6	R 3121206
MCK, 7	R 3121207
TSET, 8	R 3121208
V▶M, 9	R 3121209
CLAR, CODE	R 3121220
BAND, SHIFT	R 3121211
CALL1, *	R 3121212
CALL2, #	R 3121213
SPEAK	R 3121214

△ R 7114200 A Sponge Rubber　▽: R 7116970 B Sponge Rubber　○: R 3116820×10 Knob　□: R 3115340 (UP) / R 3115350 (DOWN) } Knob　#: R 3115320 (UP) / R 3115330 (DOWN) } Knob

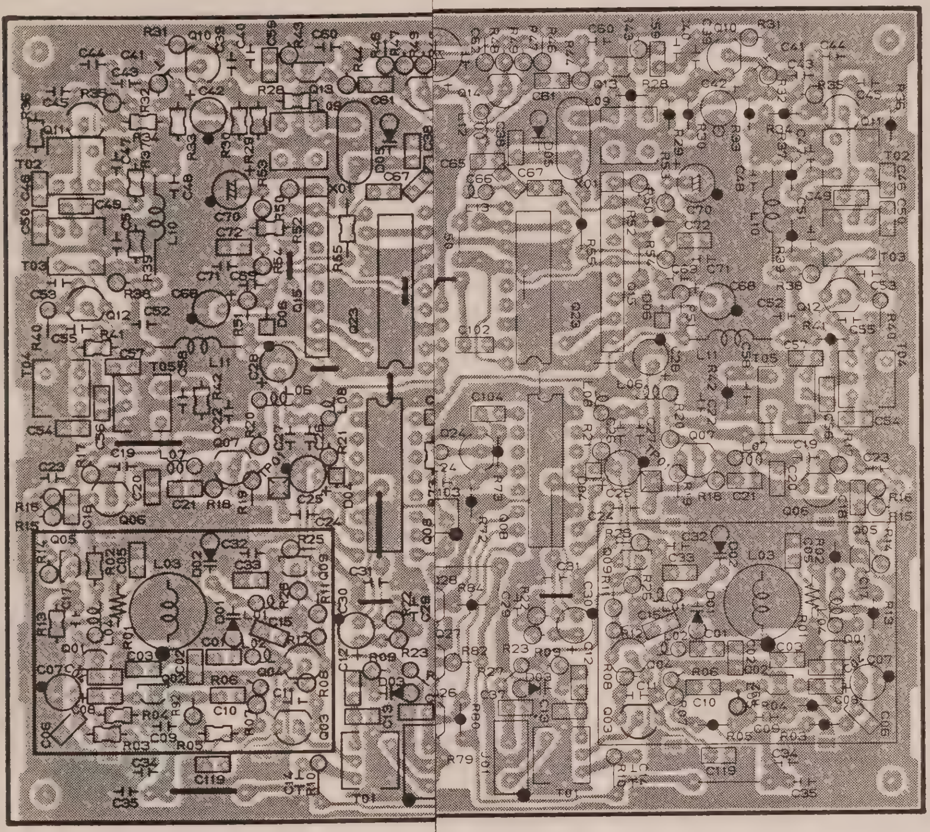
◎ R 7116980 A Sponge Rubber　☆: R 7122620 Sponge Rubber　✱: R 3119630 Knob

SCREW LIST		
Ret No.	Parts No.	Description
①	U20406007	BINDING HEAD SCREW M4X6B
②	U31414002	OVAL HEAD SCREW M4X14 Ni
③	U00406001	PAN HEAD SCREW M4X6
④	U20306007	BINDING HEAD SCREW M3X6B
⑤	U20306001	BINDING HEAD SCREW M3X6
⑥	U42306201	TAPPING SCREW 3øX6
⑦	U02306001	SEMS SCREW SM3X6
⑧	U00306001	PAN HEAD SCREW M3X6
⑨	U00314001	PAN HEAD SCREW M3X14
⑩	U40308201	TAPPING SCREW 3øX8

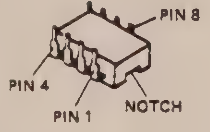


(FEX-736-50) OPTION

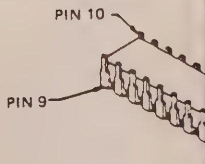
50MHz PLL UNIT (No. 1××



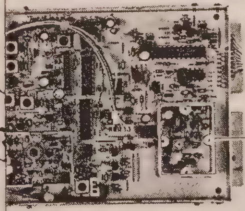
Component side (reverse)



MB504 (Q1019)
MB505-16 (Q1022)

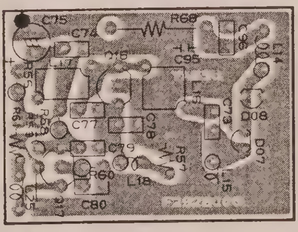


MC145155
TC9122P

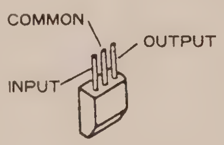


UNIT (No. 1×××)

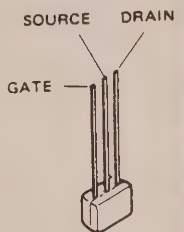
rse)



Component side (reverse)

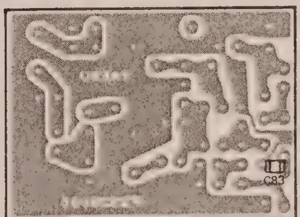


μPC78L05 (Q1034)



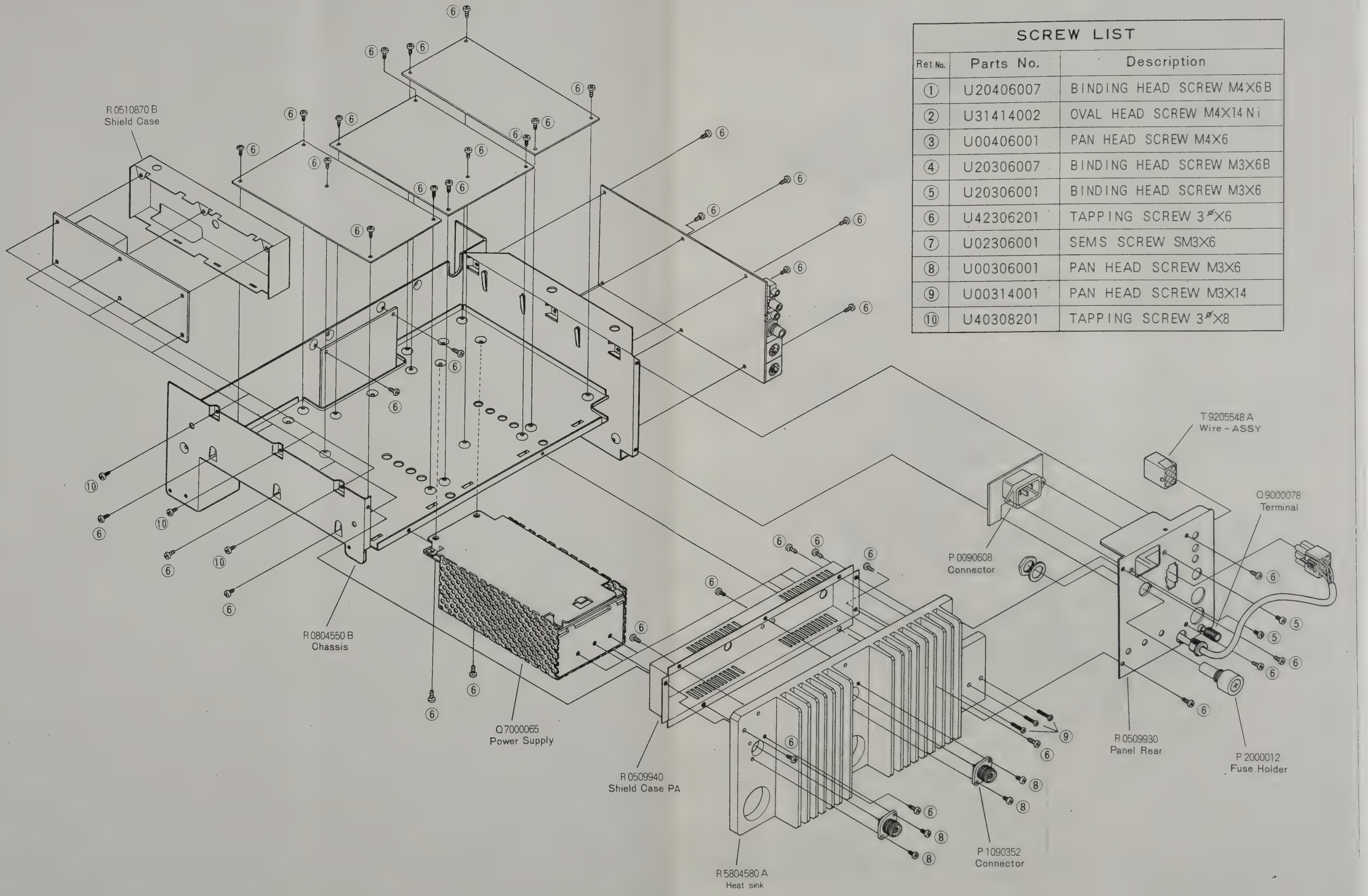
2SK241GR
(Q1009,1013)

rse)



Chip side (reverse)

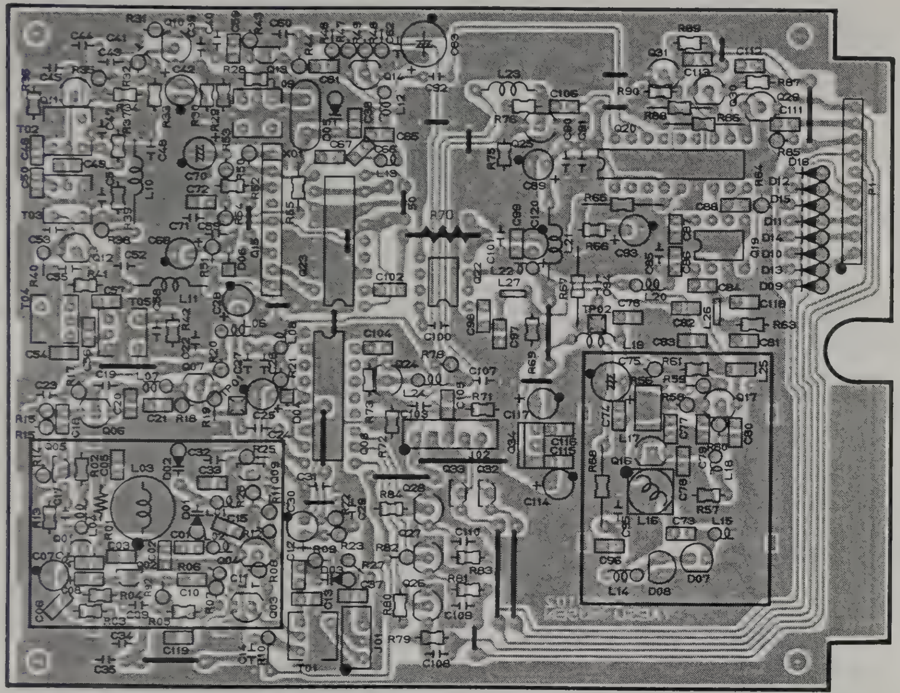
EXPLODED VIEW



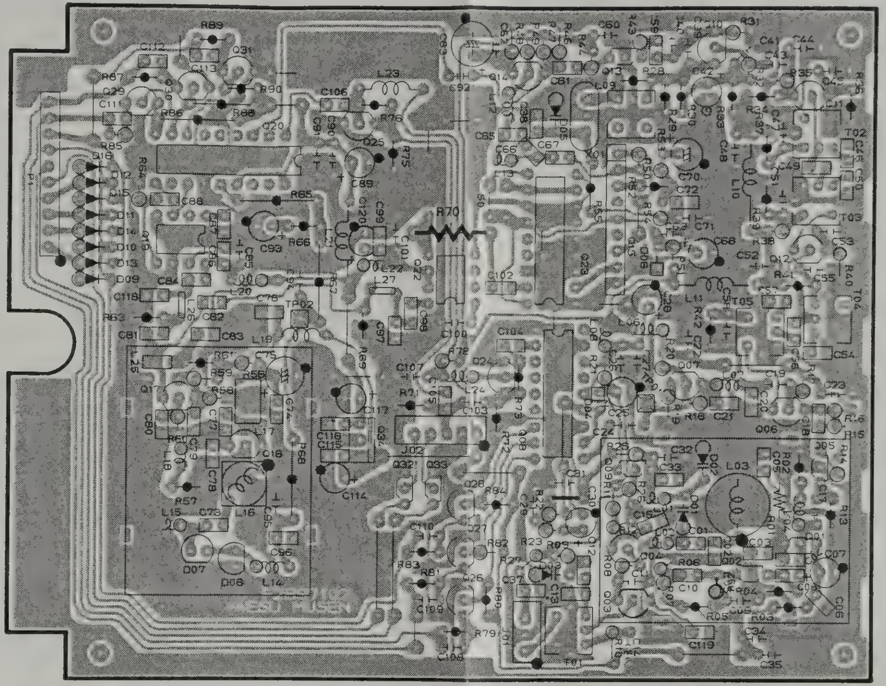
SCREW LIST		
Ret No.	Parts No.	Description
①	U20406007	BINDING HEAD SCREW M4X6B
②	U31414002	OVAL HEAD SCREW M4X14 Ni
③	U00406001	PAN HEAD SCREW M4X6
④	U20306007	BINDING HEAD SCREW M3X6B
⑤	U20306001	BINDING HEAD SCREW M3X6
⑥	U42306201	TAPPING SCREW 3$^{\varnothing}$X6
⑦	U02306001	SEMS SCREW SM3X6
⑧	U00306001	PAN HEAD SCREW M3X6
⑨	U00314001	PAN HEAD SCREW M3X14
⑩	U40308201	TAPPING SCREW 3$^{\varnothing}$X8

50MHz BAND MODULE (FEX-736-50) OPTION

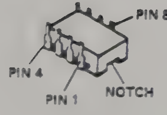
50MHz PLL UNIT (No. 1XXX)



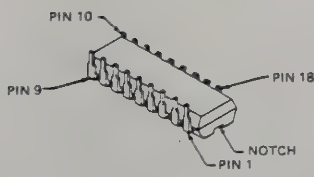
Component side (obverse)



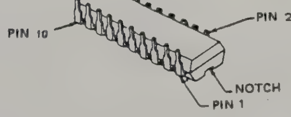
Component side (reverse)



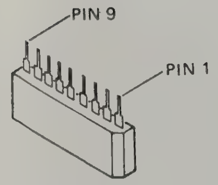
MB504 (Q1019)
MB505-16 (Q1022)



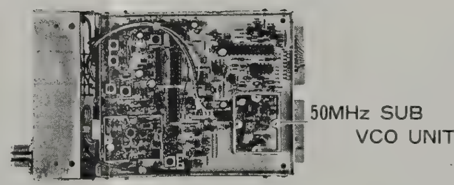
MC145155P (Q1008)
TC9122P (Q1023)

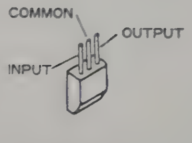


MC145156P (Q1020)

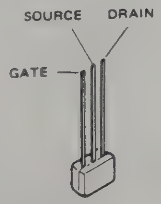


TC5081AP (Q1015)

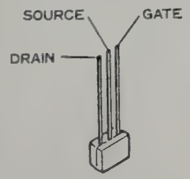




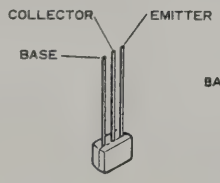
µPC78L05 (Q1034)



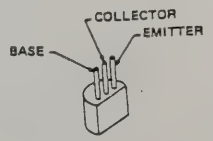
2SK241GR
(Q1009,1013)



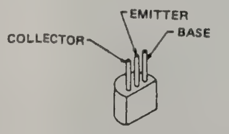
2SK507F (Q1016)



BA1A4P
(Q1032,1033)

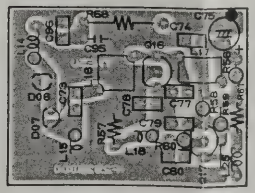


2SC458
(Q1026,1027,1028
1029,1030,1031)
2SC460B
(Q1006,1007,1010
1011,1012,1024
1025
2SC535B (Q1014)

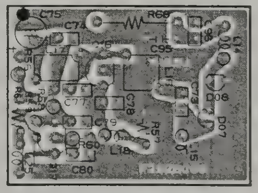


2SC3355 (Q1017)

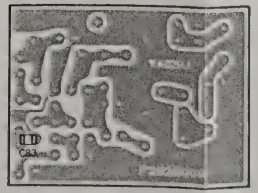
50MHz SUB VCO UNIT (No. 1XXX)



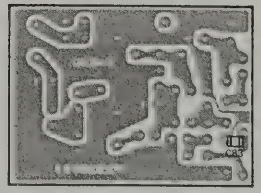
Component side (obverse)



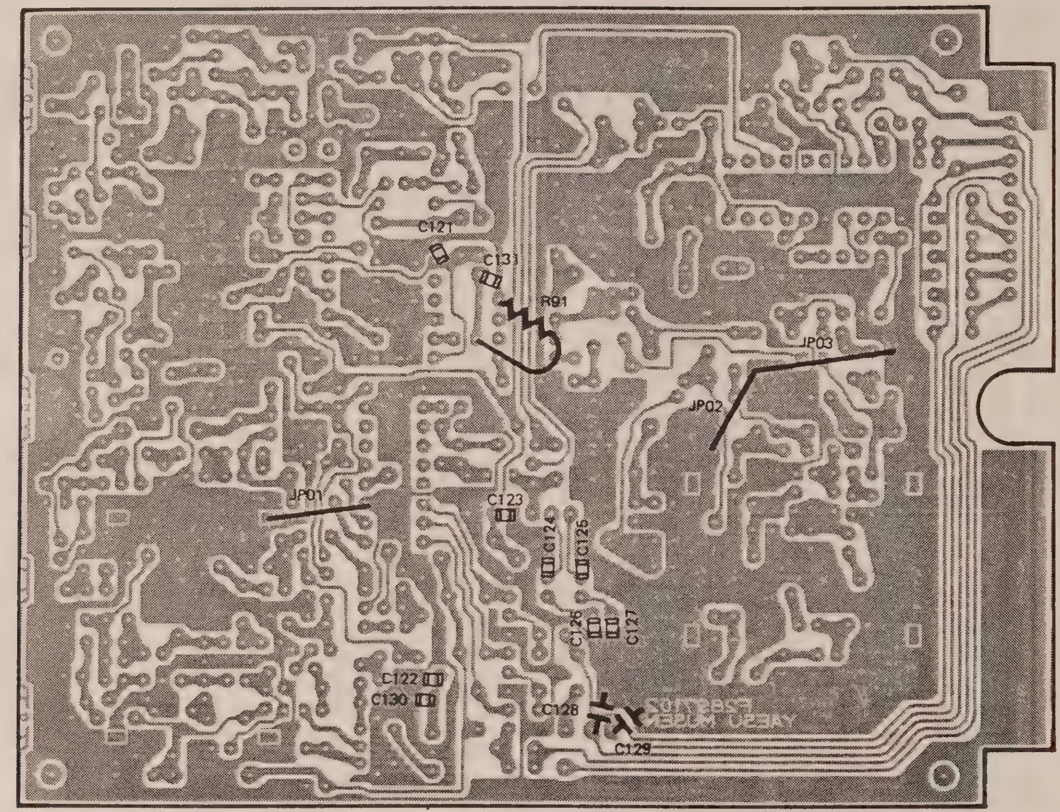
Component side (reverse)



Chip side (obverse)



Chip side (reverse)

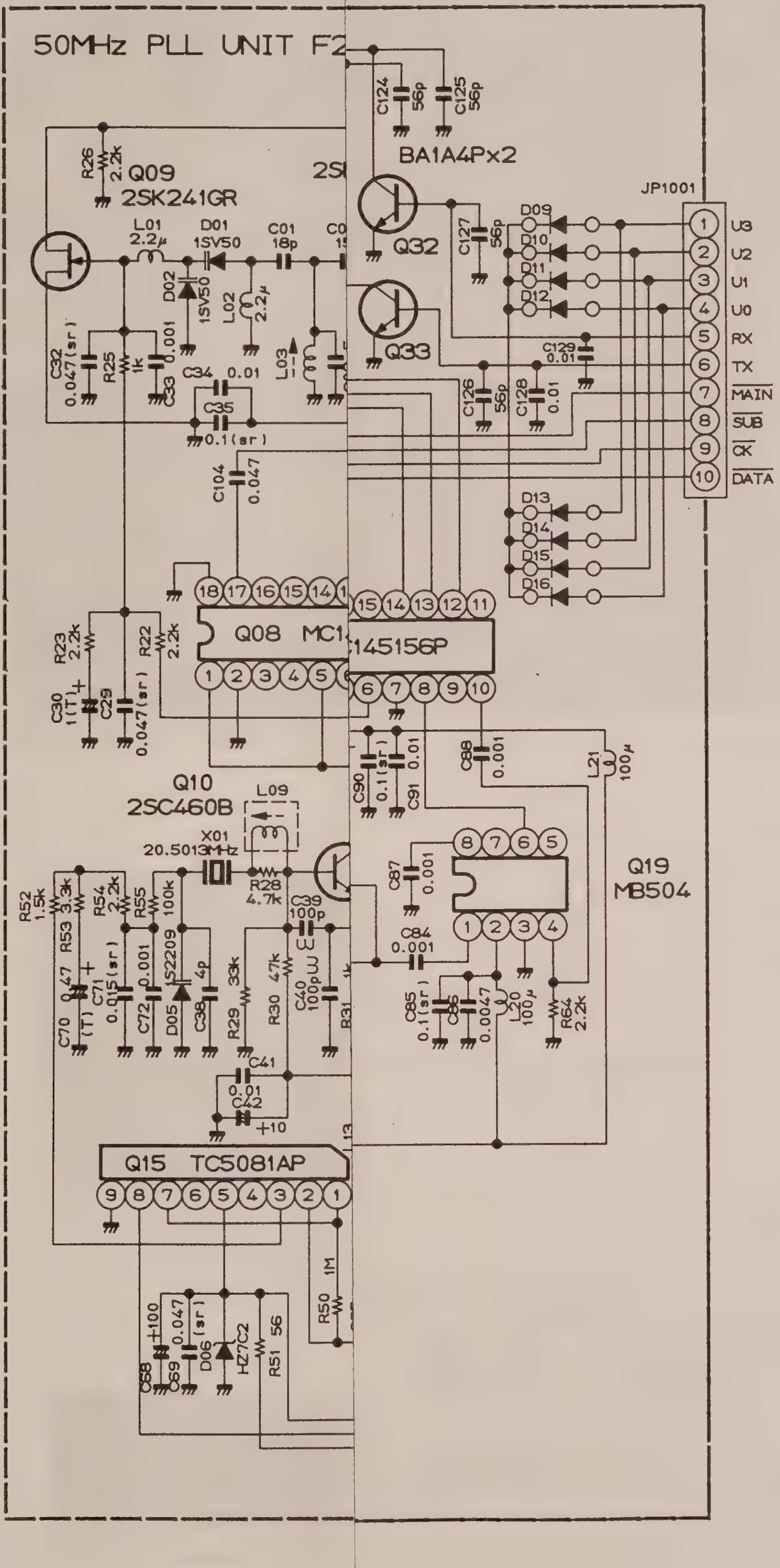


Solder side (reverse)

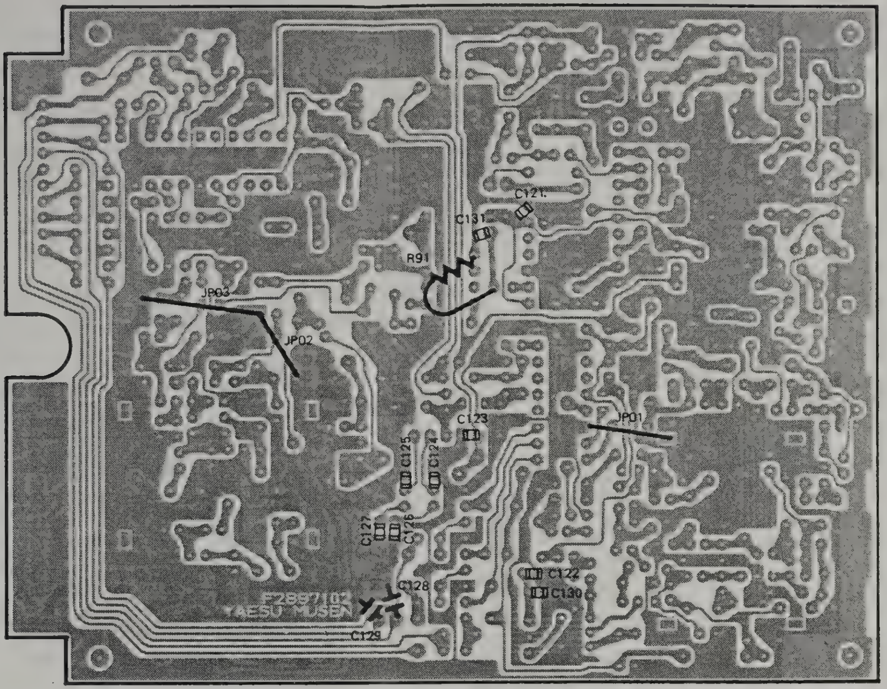
50MHz PLL UNIT IC VOLTAGE CHART

(DC VOLTS)

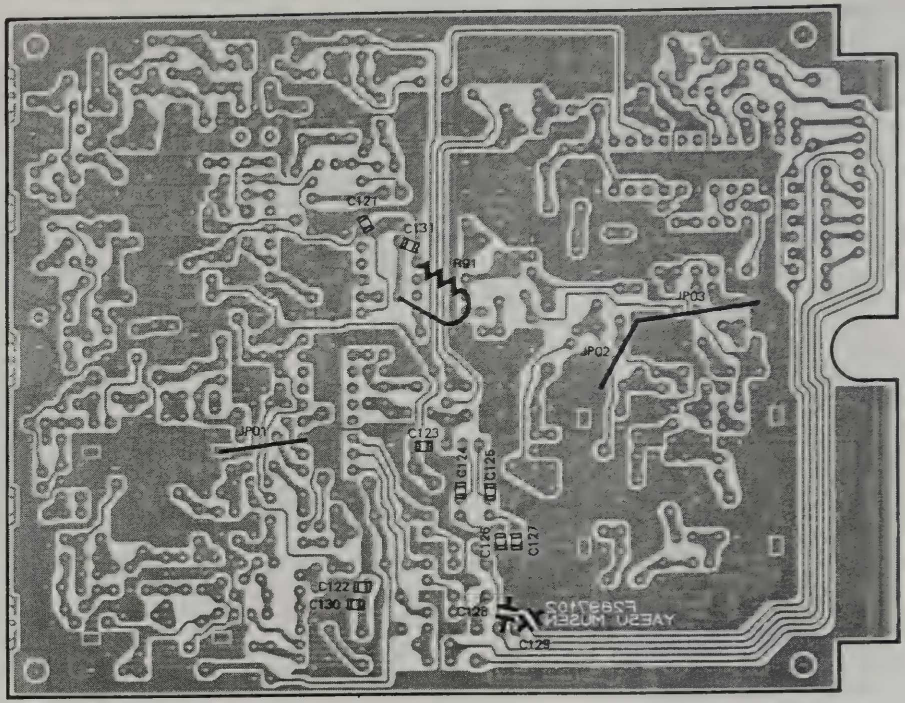
	1(IN)	2(OUT)	3(GND)	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	REMARKS
008	8.57	0	—	—	8.56	5.22	0	8.49	3.92	0.09	0.09	0.09	—	—	—	—	3.97	0			
015	3.32	3.30	2.78	—	7.57	—	3.32	0.79	0												
019	2.53	5.02	0	2.91	—	4.45	—	2.52													
020	0	5.02	—	—	5.03	1.62	0	4.45	—	1.98	0.72	0.07	0.06	0.03	—	—	2.53	—	2.04	5.03	
022	2.46	5.03	5.03	2.70	0	—	—	2.46													
023	7.56	3.11	0	0.02	0.02	7.56	0	0	7.56	0	0	0	0	0	0	0	0.79	0			
034	9.00	0	5.01																		


50MHz PLL UNIT F2
C124 56p
C125 56p
BA1A4Px2
R26 2.2k
Q09 2SK241GR
2S
L01 2.2μ
D01 1SV50
C01 18p
C0 15
Q32
Q33
C127 56p
JP1001
D09
D10
D11
D12
1 U3
2 U2
3 U1
4 U0
5 RX
6 TX
7 MAIN
8 SUB
9 CK
10 DATA
C129 0.01
C126 56p
C128 0.01
D02 1SV50
L02 2.2μ
L03
C32 0.047(sr)
R25 1k
C33 0.001
C34 0.01
C35 0.1(sr)
C104 0.047
D13
D14
D15
D16
Q08 MC145156P
R23 2.2k
R22 2.2k
C30 1(T)
C29 0.047(sr)
C90 0.1(sr)
C91 0.01
C88 0.001
L21 100μ
Q10 2SC460B
L09
X01 20.5013MHz
R28 4.7k
C39 100p
Q19 MB504
C87 0.001
C84 0.001
R52 1.5k
R53 3.3k
R54 2.2k
R55 100k
C70 47 (T)
C71 0.015(sr)
C72 0.001
D05 1S2209
C38 4p
R29 33k
R30 47k
C40 100p
R31 1k
C85 0.1(sr)
C86 0.0047
L20 100μ
R64 2.2k
C41 0.01
C42 +10
Q15 TC5081AP
13
R50 1M
C68 +100
C69 0.047(sr)
D06 HZ7C2
R51 56

50MHz BAND MODULE (FEX-736-50) OPTION



Solder side (obverse)



Solder side (reverse)

50MHz PLL UNIT VOLTAGE CHART

(DC VOLTS)

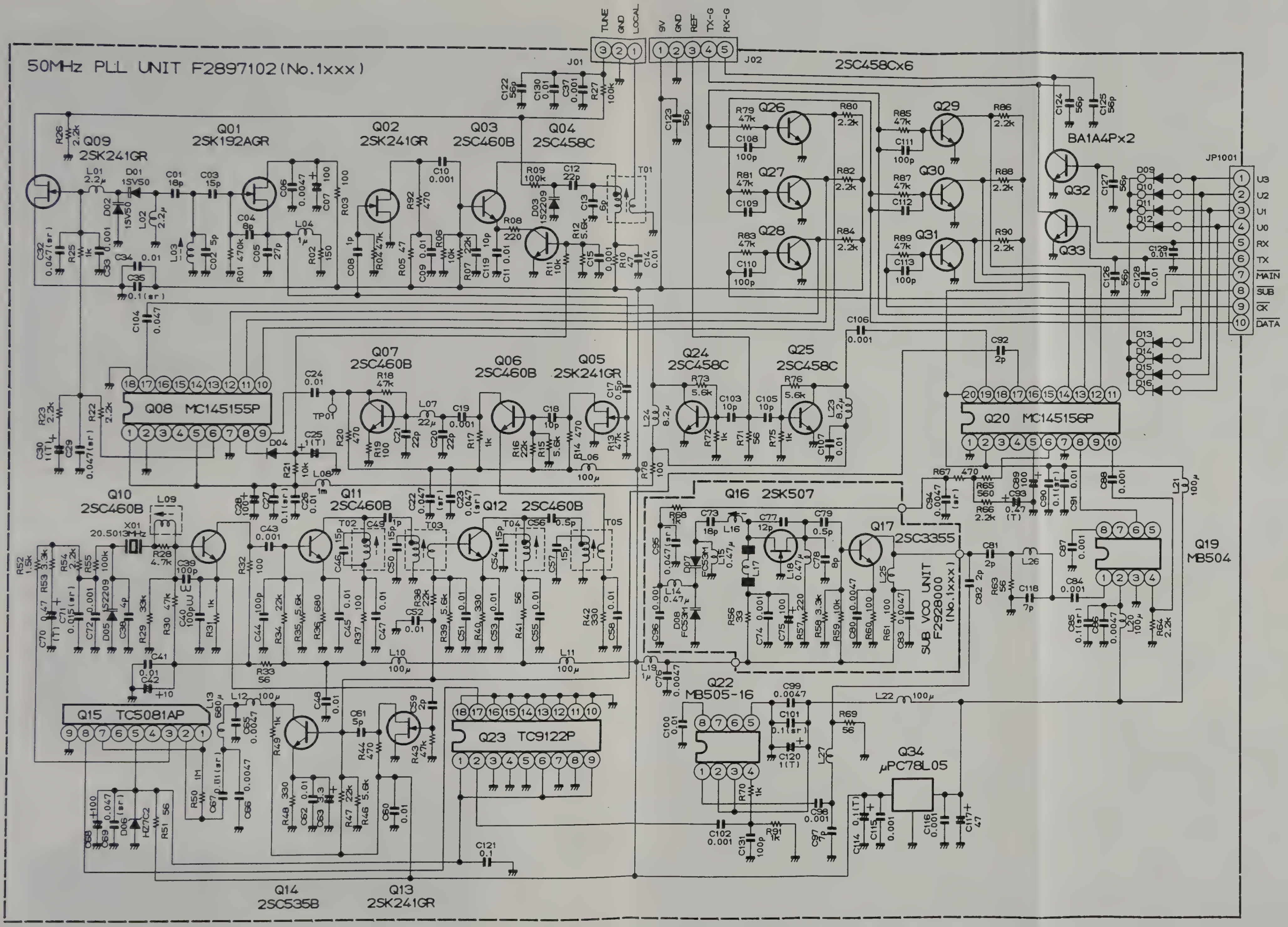
	E(S)	C(D)	B		REMARKS		E(S)	C(D)	B		REMARKS
			(G₁)	(G₂)					(G₁)	(G₂)	
Q1001	0.61	8.53	0			Q1016	0	8.77	1.20		
Q1002	0	3.10	0			Q1017	1.26	7.70	2.00		
Q1003	1.56	8.64	2.23			Q1024	0	5.67	0.72		
Q1004	0	0.07	0.71			Q1025	0	5.67	0.72		
Q1005	0	3.57	0			Q1026	0	0.07	0.67		
Q1006	0.97	5.84	1.64			Q1027	0	0.07	0.67		
Q1007	0.74	5.41	1.46			Q1028	0	0.07	0.67		
Q1009	6.17	8.56	5.38			Q1029	0	0.07	0.67		
Q1010	2.37	7.71	3.00			Q1030	0	0.07	0.67		
Q1011	1.16	8.71	1.73			Q1031	0	0.07	0.67		
Q1012	0.98	8.74	1.67			Q1032	0	0.14/8.70	4.79/0		RX/TX
Q1013	0	4.19	0			Q1033	0	8.73/0.27	4.78/0		RX/TX
Q1014	0.99	5.65	1.70								

50MHz PLL UNIT IC VOLTAGE CHART

(DC VOLTS)

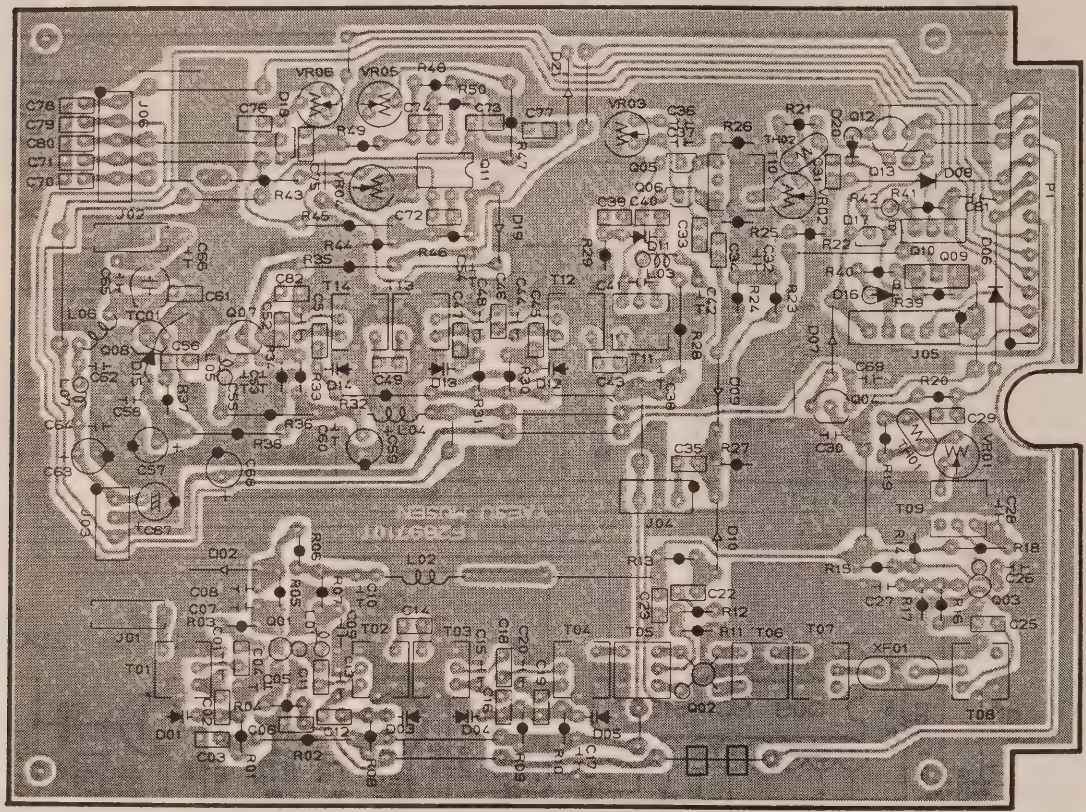
	1(IN)	2(OUT)	3(GND)	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	REMARKS
Q1008	8.57	0	—	—	8.56	5.22	0	8.49	3.92	0.09	0.09	0.09	—	—	—	—	3.97	0			
Q1015	3.32	3.30	2.78	—	7.57	—	3.32	0.79	0												
Q1019	2.53	5.02	0	2.91	—	4.45	—	2.52													
Q1020	0	5.02	—	—	5.03	1.62	0	4.45	—	1.98	0.72	0.07	0.06	0.03	—	—	2.53	—	2.04	5.03	
Q1022	2.46	5.03	5.03	2.70	0	—	—	2.46													
Q1023	7.56	3.11	0	0.02	0.02	7.56	0	0	7.56	0	0	0	0	0	0	0	0.79	0			
Q1034	9.00	0	5.01																		

50MHz BAND MODULE (FEX-736-50) OPTION



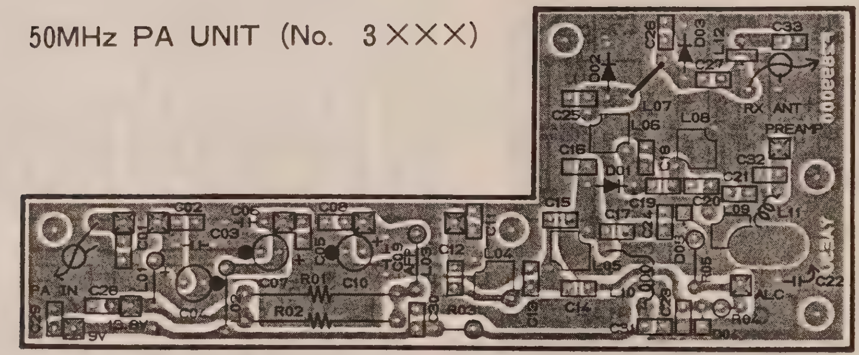
RFSISTOR VALUES ARE IN Ω. 1/6W:
CAPACITOR VALUES ARE IN µF.
INDUCTOR VALUES ARE IN HENRIES. UNLESS OTHERWISE NOTED.

DIODES ARE TYPE 1SS270 UNLESS OTHERWISE NOTED.
(T)CAPACITORS ARE TANTALUM.
(sr)CAPACITORS ARE SEMICONDUCTOR CERAMIC. 25wv:



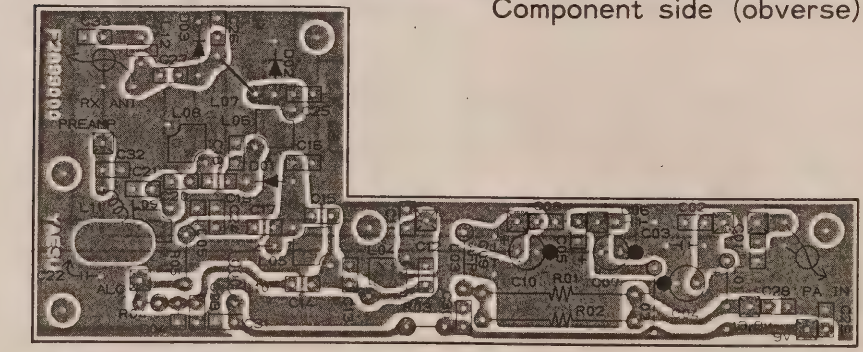
Component side (reverse)

50MHz PA UNIT (No. 3×××)

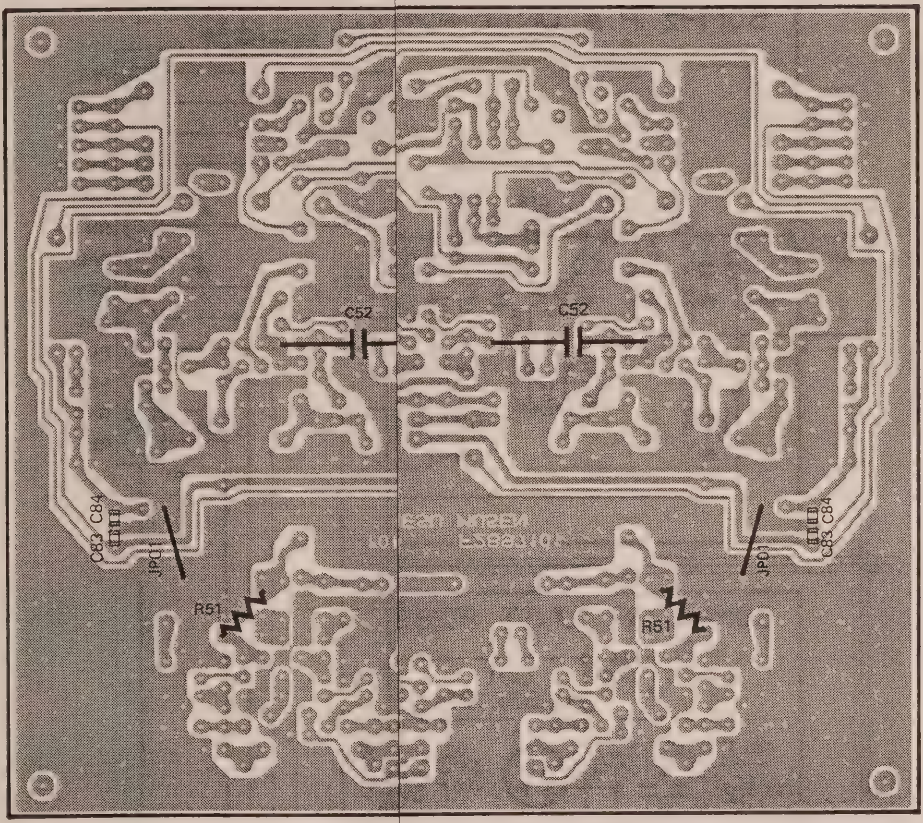


Component side (obverse)

1. INPUT
2. V_{CC1}
3. V_{CC2}
4. V_{CC3}
5. OUTPUT
6. FLA



Component side (reverse)



Solder side (reverse)

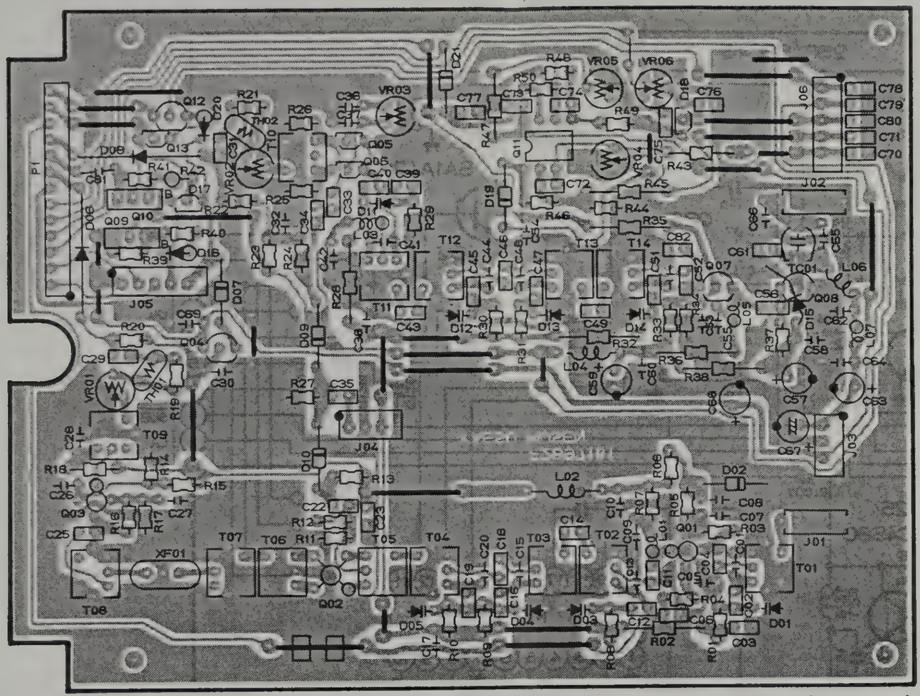
50MHz R

RT (DC VOLTS)

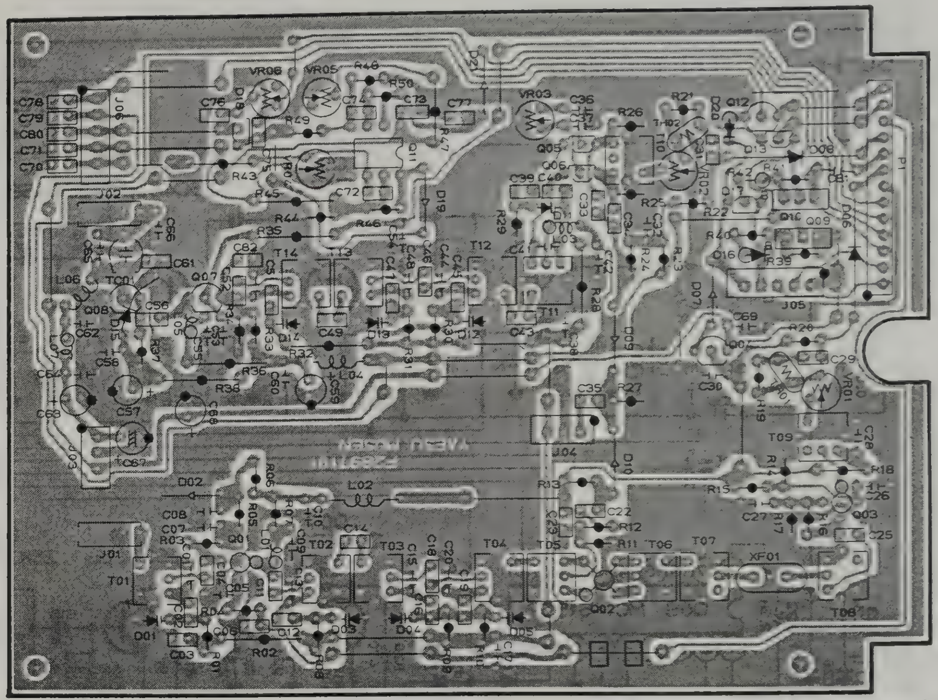
	E(S)	16	17	18	19	20	REMARKS
Q2001	1.24						
Q2003	0.61						@ 10W output
Q2004	9.00						@ 10W output
Q2005	0.95						
Q2006	0.95						
Q2007	1.71						
Q2008	0						
Q2009	8.98						
Q2010	13.80						
Q2012	0/12.50						
Q2013	0						

50MHz BAND MODULE (FEX-736-50) OPTION

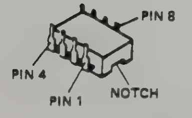
50MHz RF UNIT (No. 2XXX)



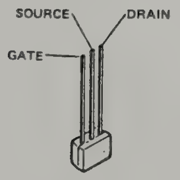
Component side (obverse)



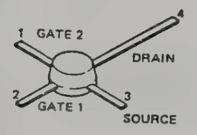
Component side (reverse)



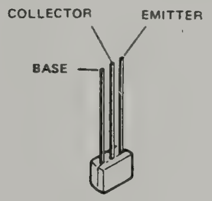
LA6358 (Q2011)



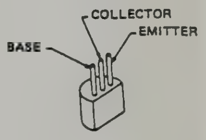
2SK241GR (Q2004,2005)



3SK122L (Q2003)

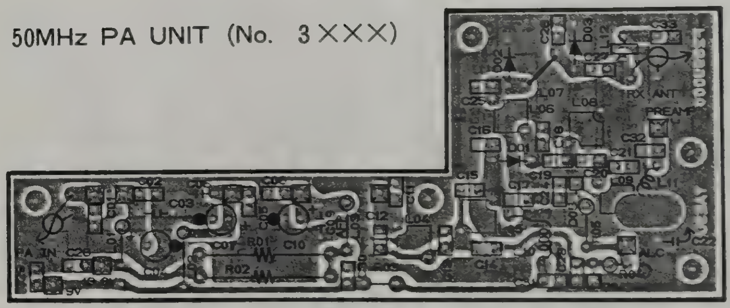


BA1A4P (Q2013)

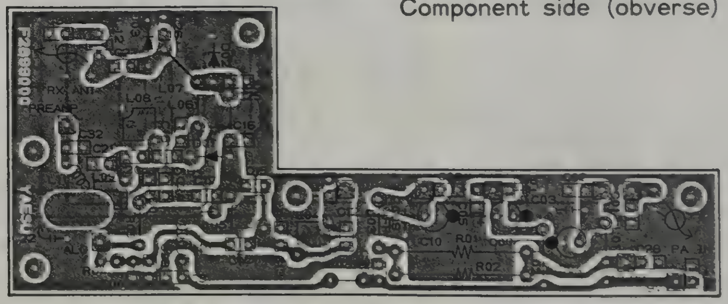


2SA1528 (Q2004,2012)

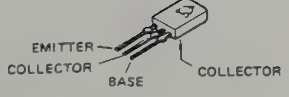
50MHz PA UNIT (No. 3XXX)



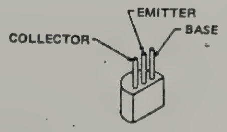
Component side (obverse)



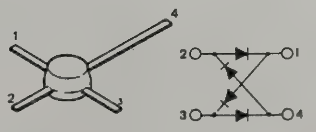
Component side (reverse)



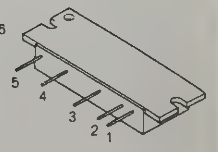
2SB772Q (Q2009,2010)



2SC2026 (Q2007)
2SC2538 (Q2008)



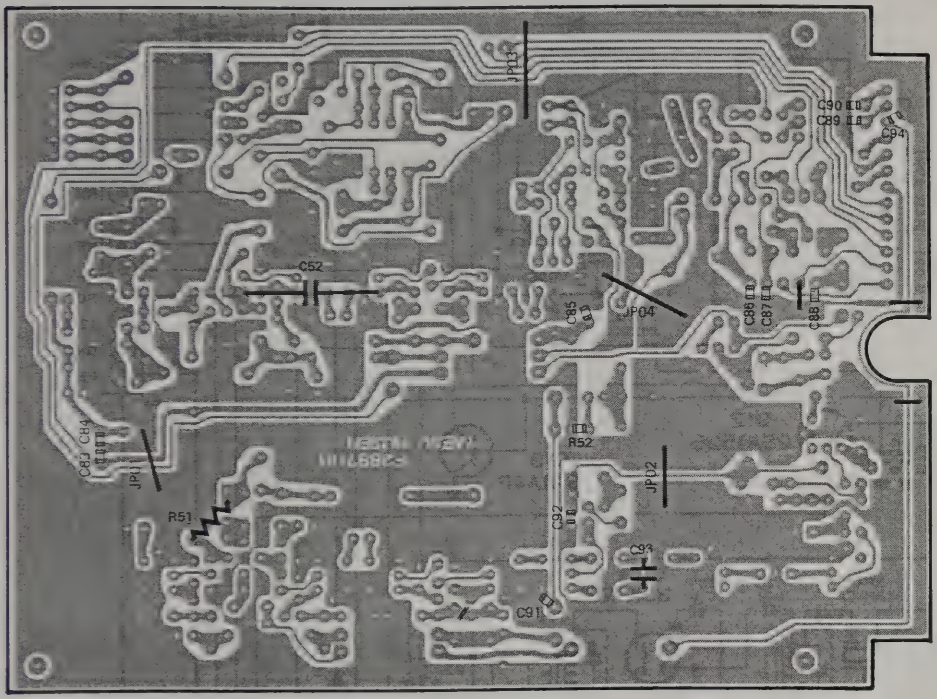
ND487C1-3R (Q2002)



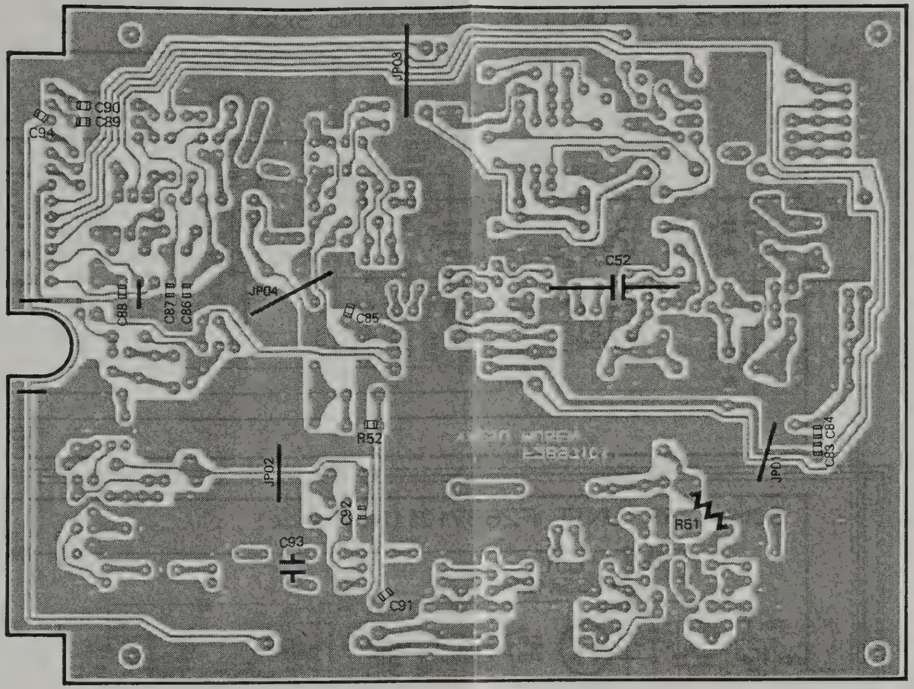
M57735 (Q3001)

1. INPUT
2. V_{CC1}
3. V_{CC2}
4. V_{CC3}
5. OUTPUT
6. FLA

50MHz BAND MODULE (FEX-736-50) OPTION



Solder side (obverse)



Solder side (reverse)

50MHz RF UNIT VOLTAGE CHART

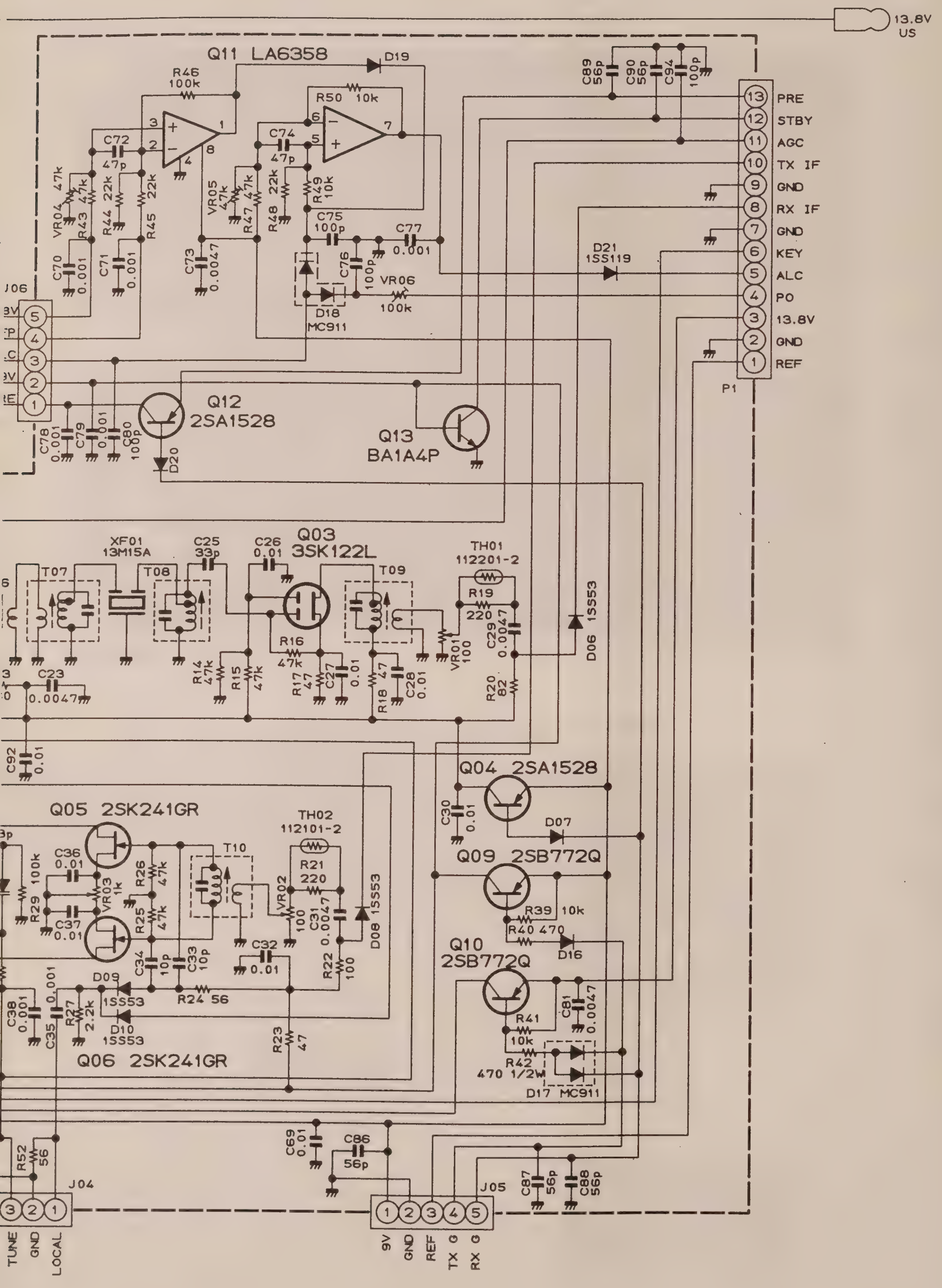
(DC VOLTS)

	E(S)	C(D)	B (G₁)	(G₂)	REMARKS
Q2001	1.24	8.50	1.07	1.99	
Q2003	0.61	8.34	0.61	4.44	
Q2004	9.00	8.93/0.02	8.80/8.96		RX/TX
Q2005	0.95	8.94	0.05		
Q2006	0.95	8.94	0.05		
Q2007	1.71	8.78	2.47		
Q2008	0	13.04	0.64		
Q2009	8.98	0/8.90	8.89/8.22		RX/TX
Q2010	13.80	13.42/13.19	12.80/12.62		RX/TX
Q2012	0/12.50	0/12.50	0/0.79		PRE AMP OFF/ON
Q2013	0	0	0/8.90		RX/TX

50MHz RF UNIT IC VOLTAGE CHART

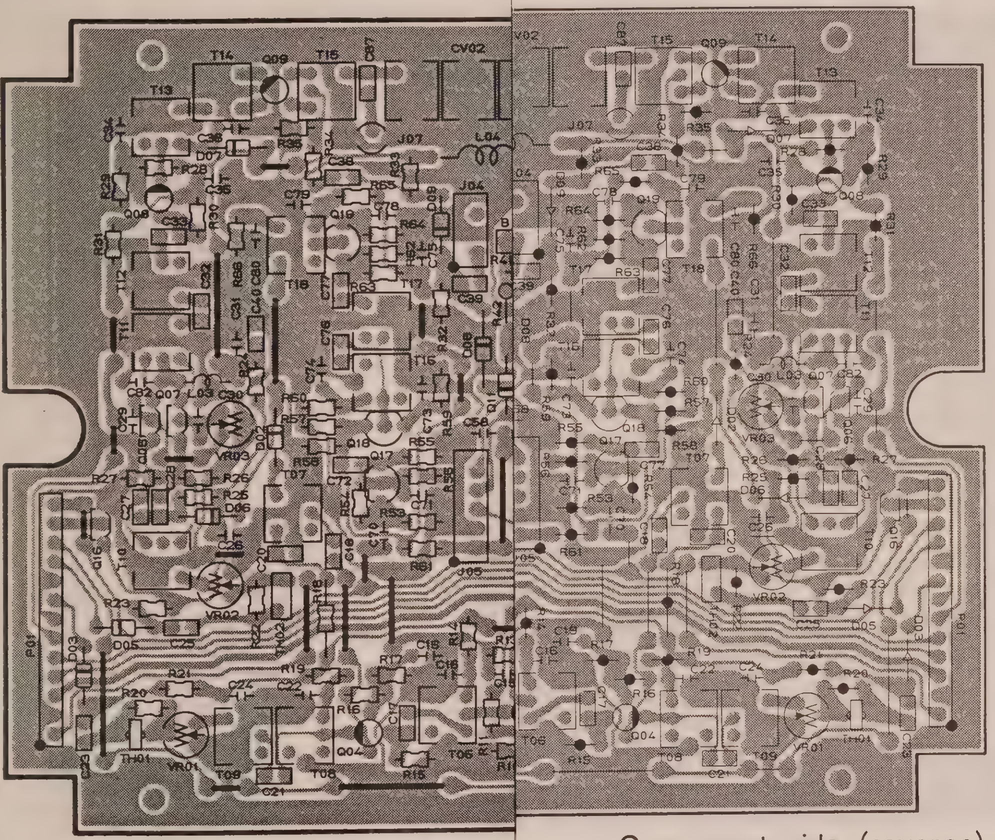
(DC VOLTS)

	1(IN)	2(OUT)	3(GND)	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	REMARKS
Q2002	0	0																			
Q2011	8.67	6.14	6.13	0.07	1.27	1.27	1.20	9.06													@ 10W output
Q3001	—	13.8	9.00	13.42	—																@ 10W output
Q01	13.50	0	9.05																		

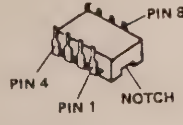

13.8V
US
Q11 LA6358
D19
R46
100k
R50 10k
C72
47p
C74
47p
VR04 47k
R43 47k
R44 22k
R45 22k
VR05 47k
R47 47k
R48 22k
R49 10k
C75
100p
C77
0.001
C70 0.001
C71 0.001
C73 0.0047
C76 100p
VR06
100k
D18
MC911
D21
1SS119
C89 56p
C90 56p
C94 100p
PRE
STBY
AGC
TX IF
GND
RX IF
GND
KEY
ALC
PO
13.8V
GND
REF
P1
J06
Q12
2SA1528
Q13
BA1A4P
C78 0.001
C79 0.001
C80 100p
D20
XF01
13M15A
T07
T08
C25
33p
C26
0.01
Q03
3SK122L
T09
TH01
112201-2
R19
220
C29 0.0047
VR01 100
D06 1SS53
R14 47k
R15 47k
R16
47k
R17 47
C27 0.01
R18 47
C28 0.01
R20 82
C23
0.0047
C92 0.01
Q04 2SA1528
C30 0.01
D07
Q09 2SB772Q
R39 10k
R40 470
D16
Q10
2SB772Q
R41
10k
C81 0.0047
R42
470 1/2W
D17 MC911
Q05 2SK241GR
C36
0.01
R29 100k
VR03 1k
R26 47k
R25 47k
C37
0.01
T10
TH02
112101-2
R21
220
VR02 100
C31 0.0047
D08 1SS53
C32
0.01
R22 100
C34 10p
C33 10p
D09
1SS53
D10
1SS53
R24 56
R23 47
C38 0.001
C35 0.001
R27 2.2k
Q06 2SK241GR
C69 0.01
C86
56p
C87 56p
C88 56p
R52 56
J04
TUNE
GND
LOCAL
J05
9V
GND
REF
TX G
RX G

(FEX-736-220) OPTION

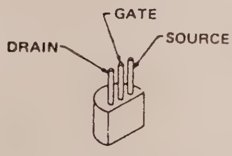
220MHz RF UNIT (No. 2 ×××)



Component side (reverse)



LA6358 (Q2014)



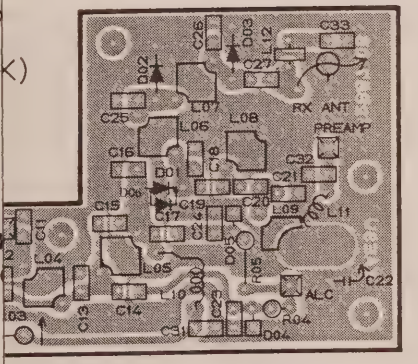
2SK125 (Q2020)

SO

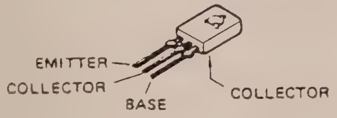
DRAK)

2S

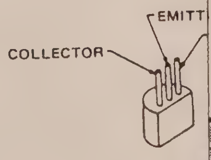
(



Component side (obverse)

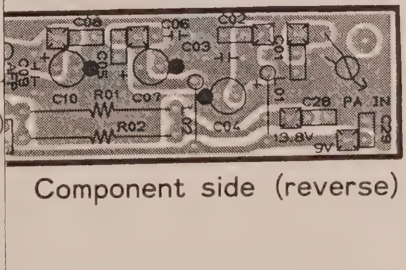


2SB772Q (Q2012,2013)



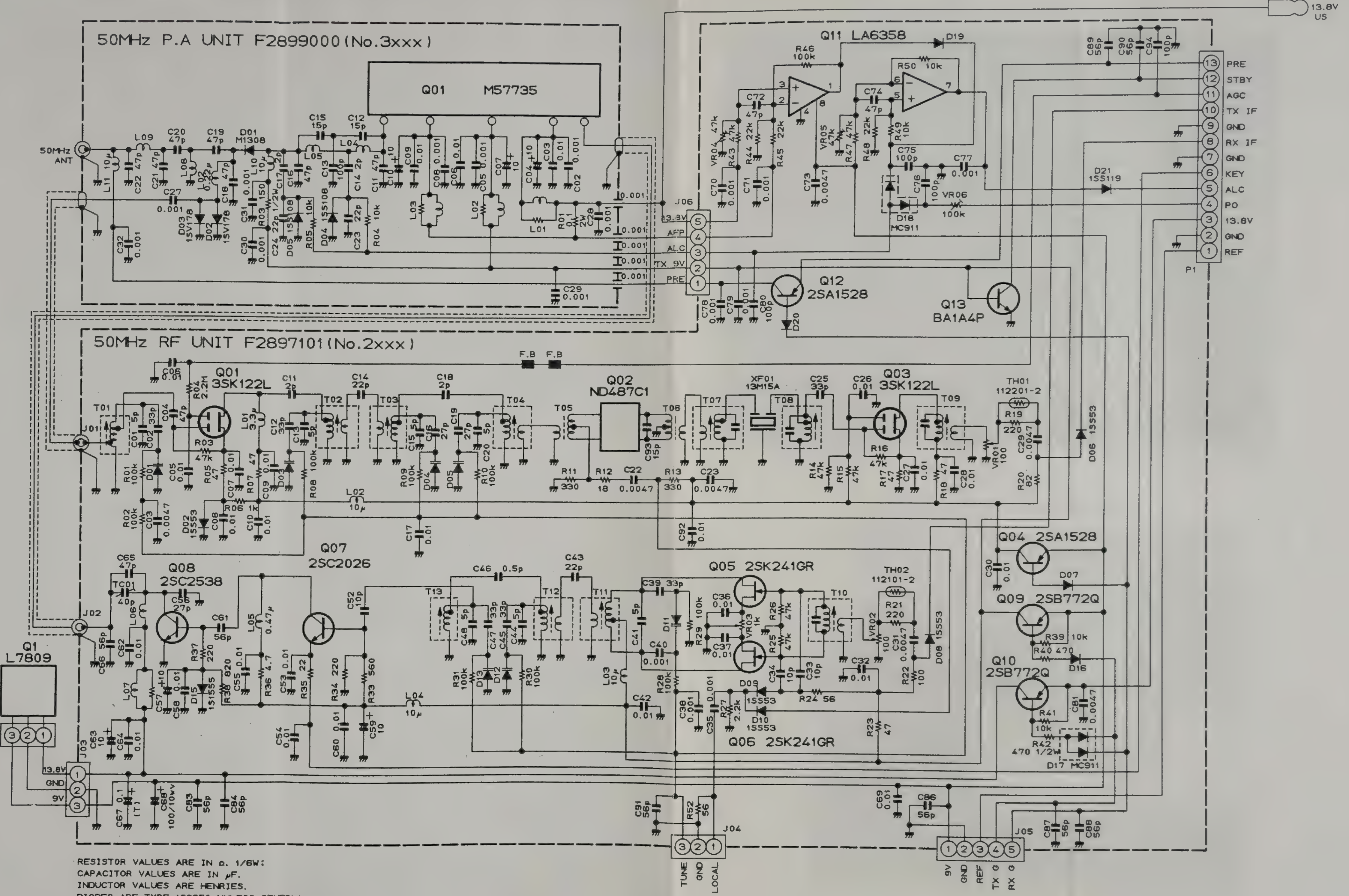
2SC2407(1) (Q20

2SC3355 (Q2010)



Component side (reverse)

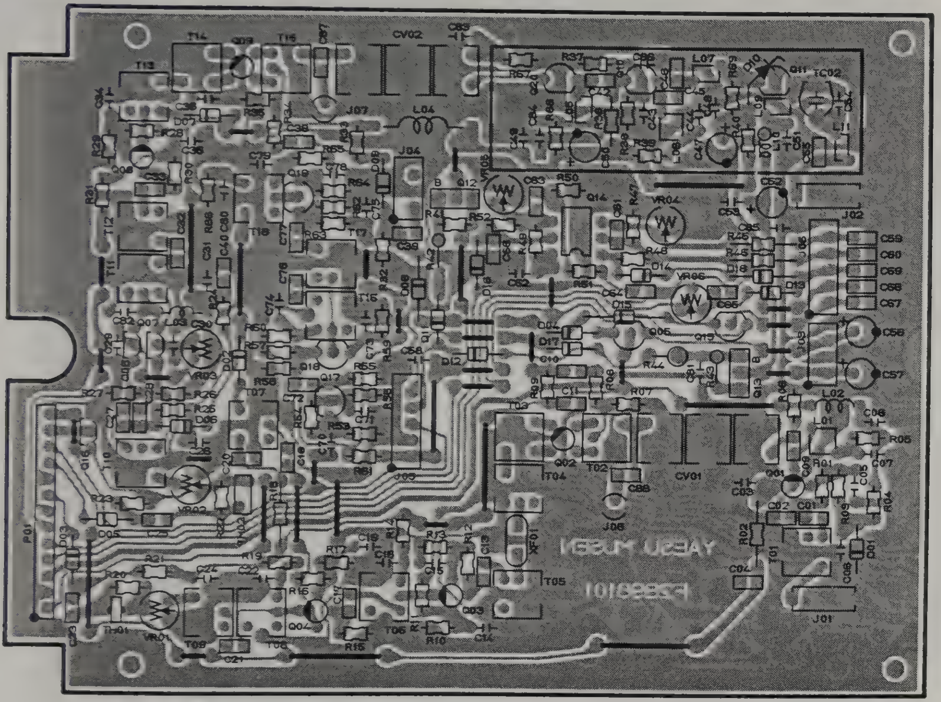
50MHz BAND MODULE (FEX-736-50) OPTION



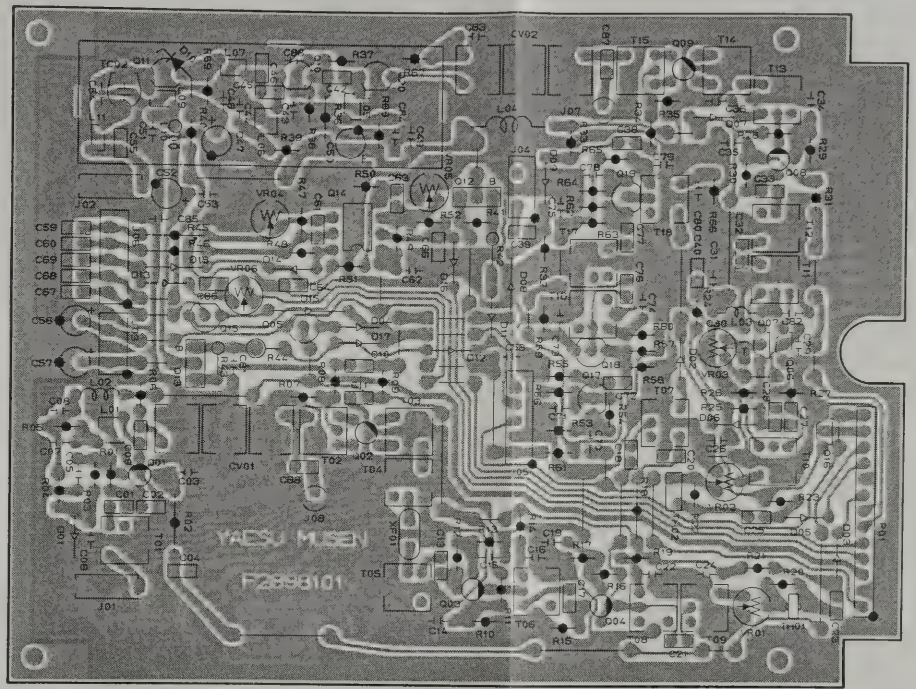
RESISTOR VALUES ARE IN Ω. 1/6W;
CAPACITOR VALUES ARE IN μF.
INDUCTOR VALUES ARE HENRIES.
DIODES ARE TYPE 1SS270 UNLESS OTHERWISE NOTED.
(T)CAPACITORS ARE TANTALUM.

220MHz BAND MODULE (FEX-736-220) OPTION

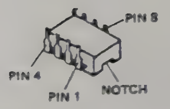
220MHz RF UNIT (No. 2×××)



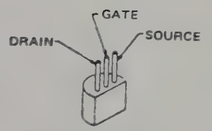
Component side (obverse)



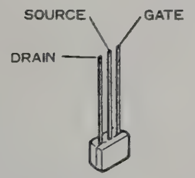
Component side (reverse)



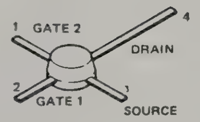
LA6358 (Q2014)



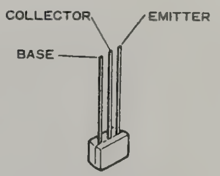
2SK125 (Q2020)



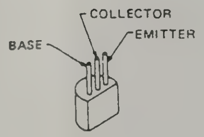
2SK241GR
(Q2006,2007)



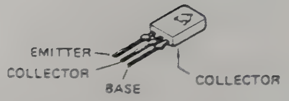
3SK122L
(Q2001,2003,2008)
3SK81 (Q2004)



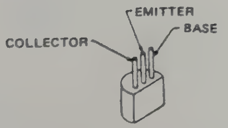
BA1A4P (Q2016)



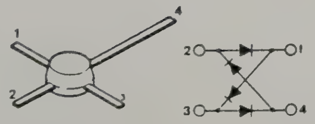
2SA1528 (Q2005,2015)
2SC535B (Q2018,2019)



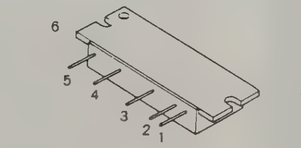
2SB772Q (Q2012,2013)



2SC2407(1) (Q2011)
2SC3355 (Q2010)



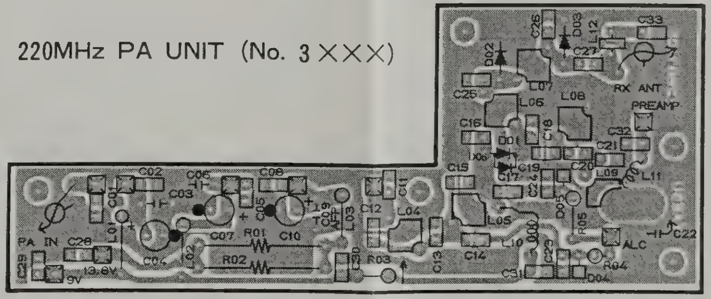
ND487C1-3R (Q2002)



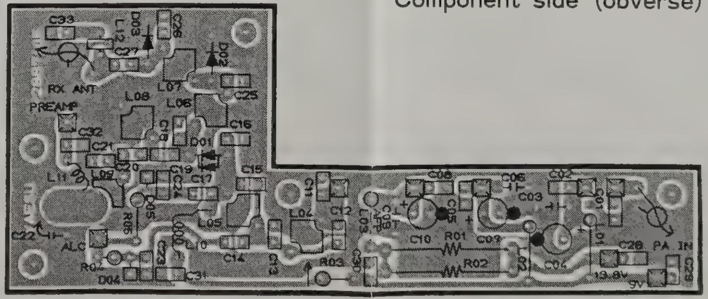
1.INPUT 2.V_{CC1} 3.V_{CC2}
4.V_{CC3} 5.OUTPUT 6.FLANGE

M67712 (Q3001)

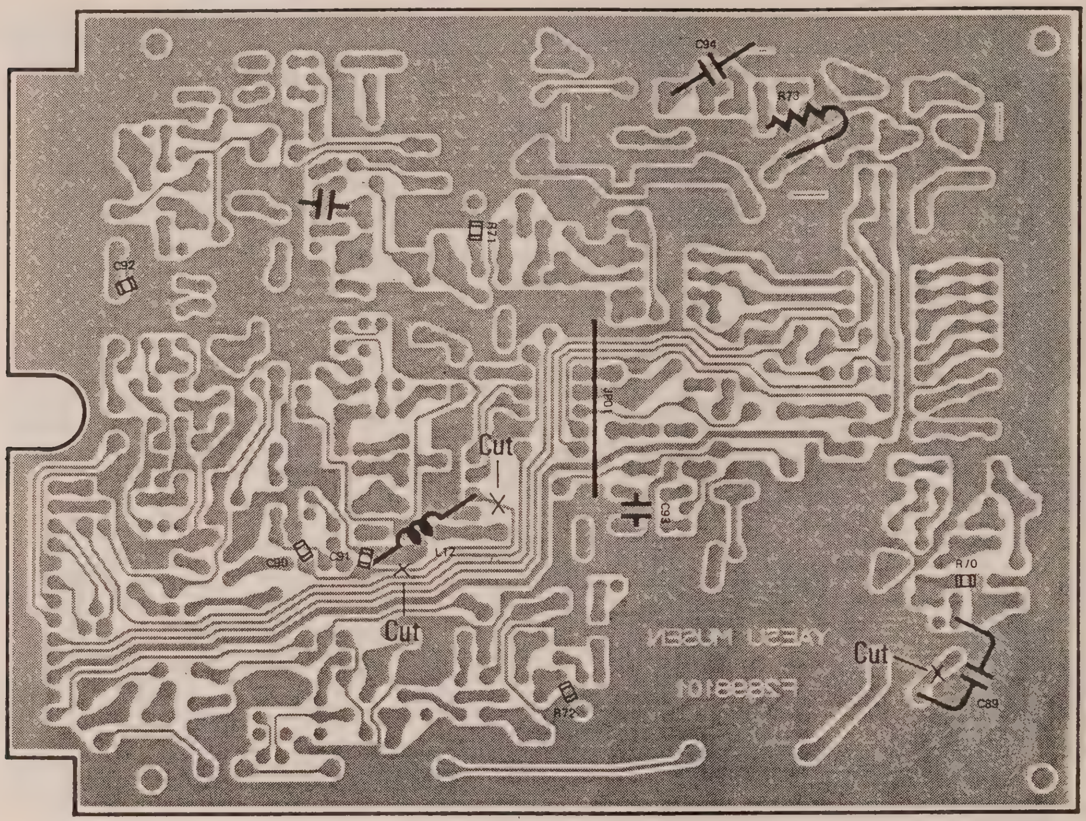
220MHz PA UNIT (No. 3×××)



Component side (obverse)



Component side (reverse)



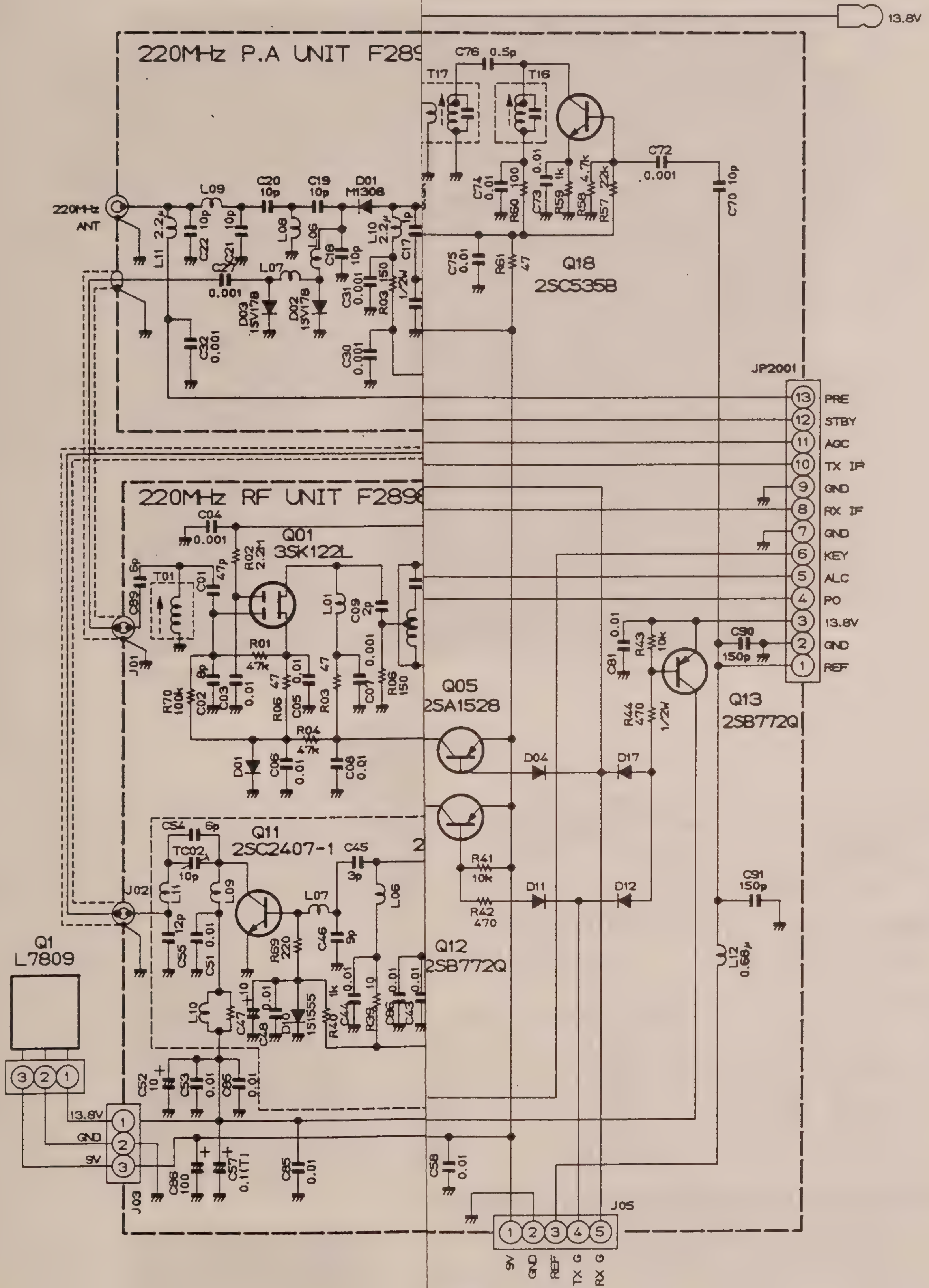
Solder side (reverse)

220MHz RF UNIT IC VOLTAGE CHART

(DC VOLTS)

UT)	3(GND)	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	REMARKS
)																			
)																			
02	6.02	0	1.57	1.57	1.06	8.97													@ 10W output
80	9.00	13.16	—																@ 10W output
0	0																		

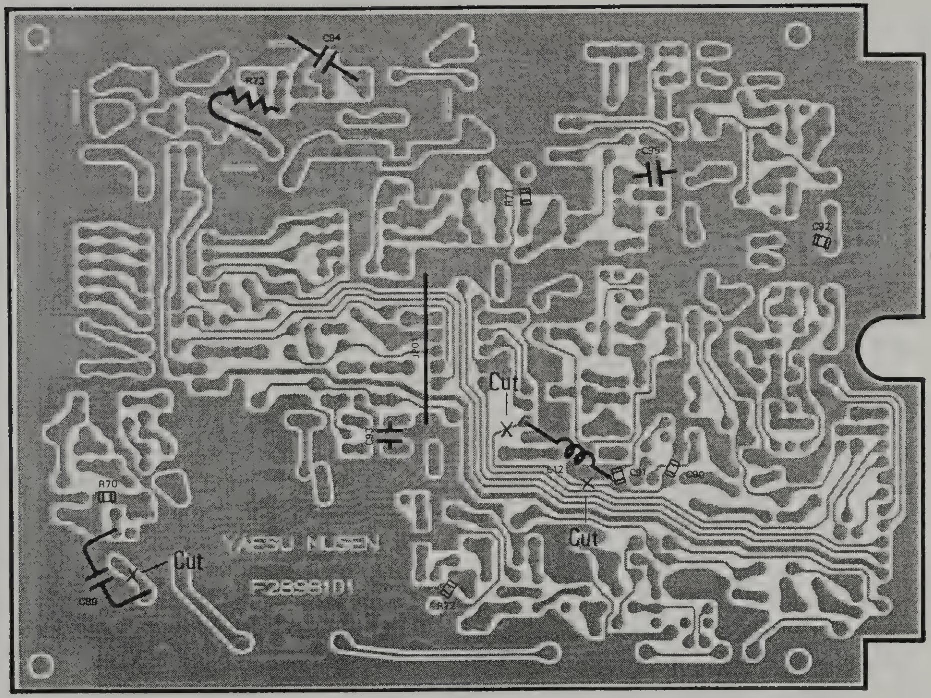
E(FEX-736-220) OPTION



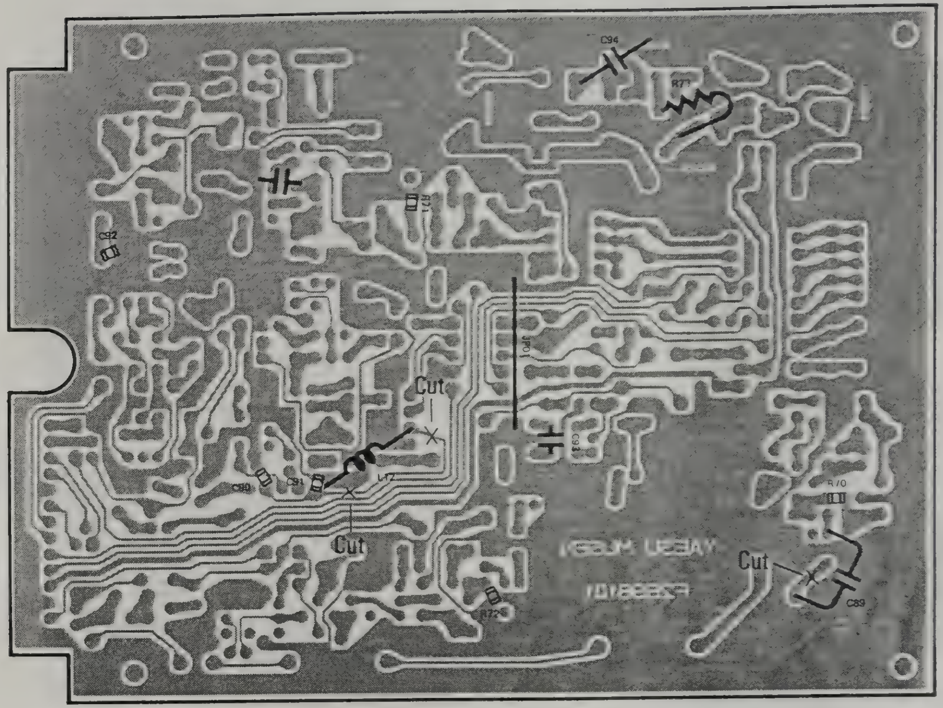
E NOTED.

MIC. 25wv:

220MHz BAND MODULE (FEX-736-220) OPTION



Solder side (obverse)



Solder side (reverse)

220MHz RF UNIT VOLTAGE CHART

(DC VOLTS)

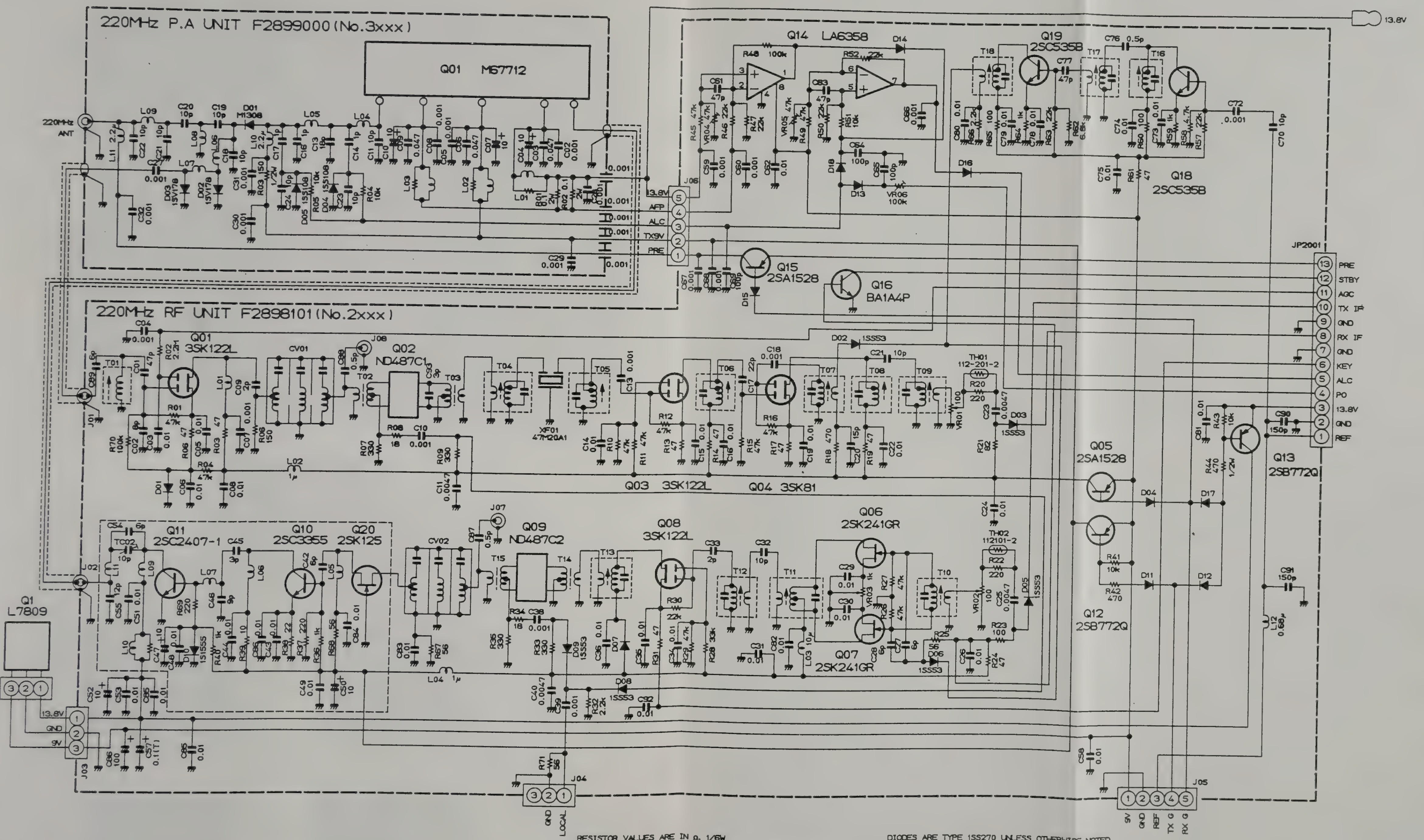
	E(S)	C(D)	B (G₁)	B (G₂)	REMARKS
Q2001	1.02	8.64	0.92	1.99	
Q2003	0.50	8.43	0.33	4.47	
Q2004	0.28	8.67	0	0.19	
Q2005	9.00	8.95/0	0.79/8.89		RX/TX
Q2006	1.0	8.9	0		
Q2007	1.0	8.9	0		
Q2008	1.69	8.18	1.82	5.21	
Q2010	0.81	8.55	1.55		
Q2011	0	12.56	0.47		
Q2012	9.00	0/8.91	8.99/8.20		RX/TX
Q2013	13.80	13.44/12.85	12.72/12.16		RX/TX
Q2015	0/12.50	0/12.50	0/0.79		PRE AMP OFF/ON
Q2016	0	0.23/0	0/8.53		RX/TX
Q2018	0.97	8.76	1.52		
Q2019	1.34	8.73	2.00		
Q2020	1.28	7.65	0		

220MHz RF UNIT IC VOLTAGE CHART

(DC VOLTS)

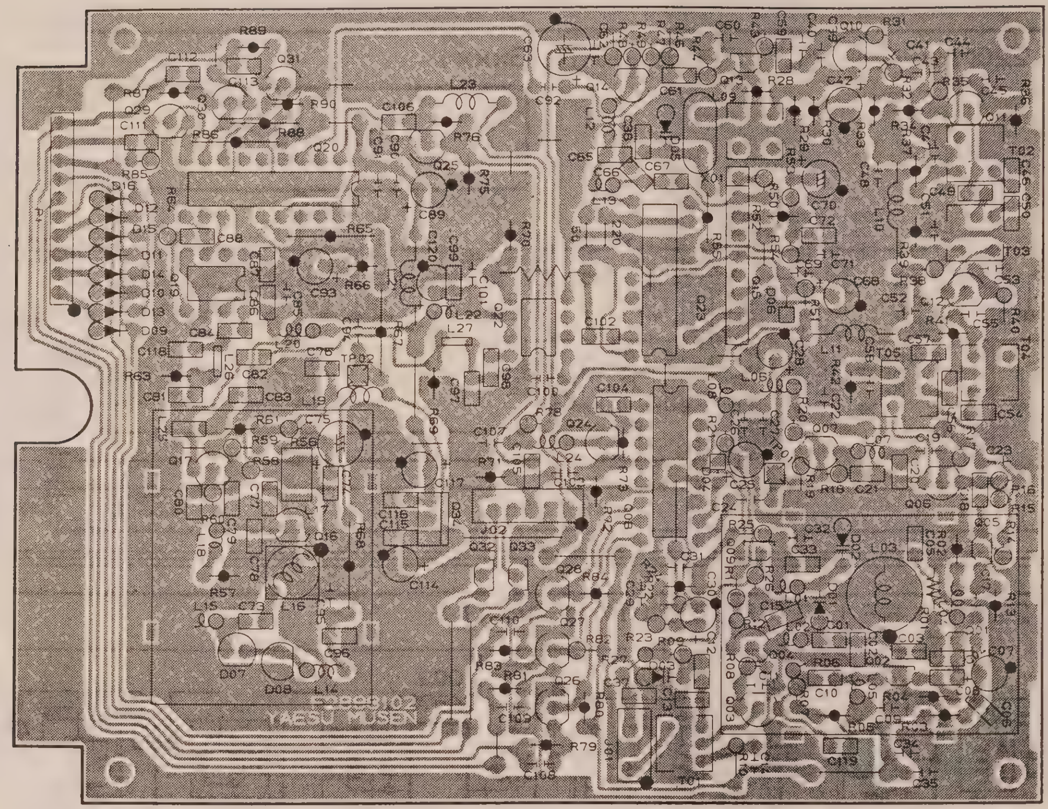
	1(IN)	2(OUT)	3(GND)	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	REMARKS
Q2002	0	0																			
Q2009	0	0																			
Q2014	1.19	6.02	6.02	0	1.57	1.57	1.06	8.97													@ 10W output
Q3001	—	13.80	9.00	13.16	—																@ 10W output
Q01	13.8	8.0	0																		

220MHz BAND MODULE(FEX-736-220) OPTION

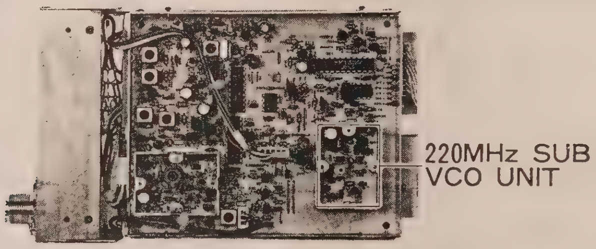


RESISTOR VALUES ARE IN Ω. 1/6W
CAPACITOR VALUES ARE IN μF.
INDUCTOR VALUES ARE IN HENRIES. UNLESS OTHERWISE NOTED.

DIODES ARE TYPE 1SS270 UNLESS OTHERWISE NOTED.
(T)CAPACITORS ARE TANTALUM.
(sr)CAPACITORS ARE SEMICONDUCTOR CERAMIC. 25wv;



Component side (reverse)



1

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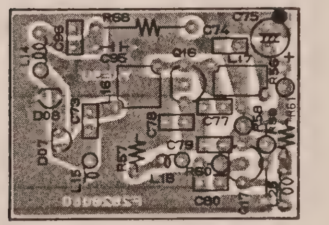
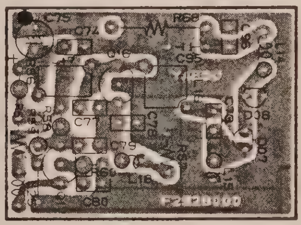
17)

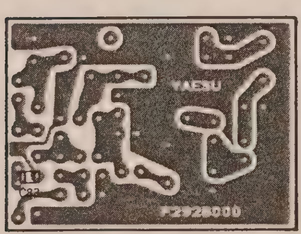
220MHz SUB VCO UNIT (No. 1XXX)



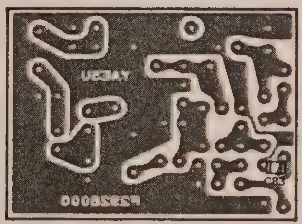
Component side (obverse)



Component side (reverse)

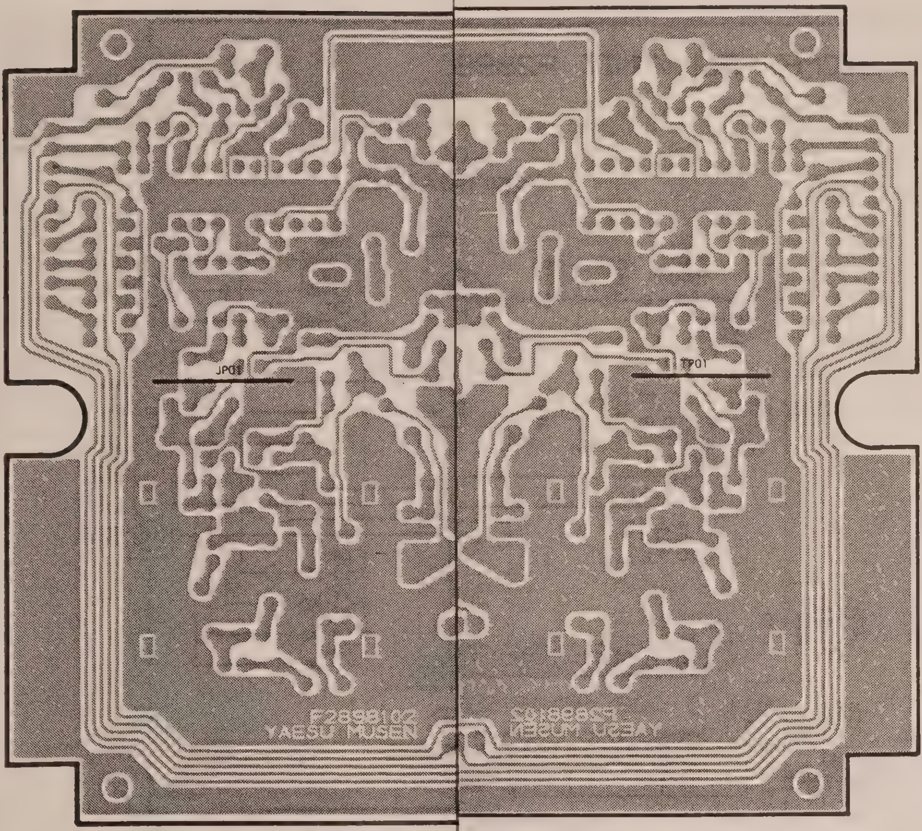


Solder side (obverse)



Solder side (reverse)

(FEX-736-220) OPTION



Solder side (reverse)

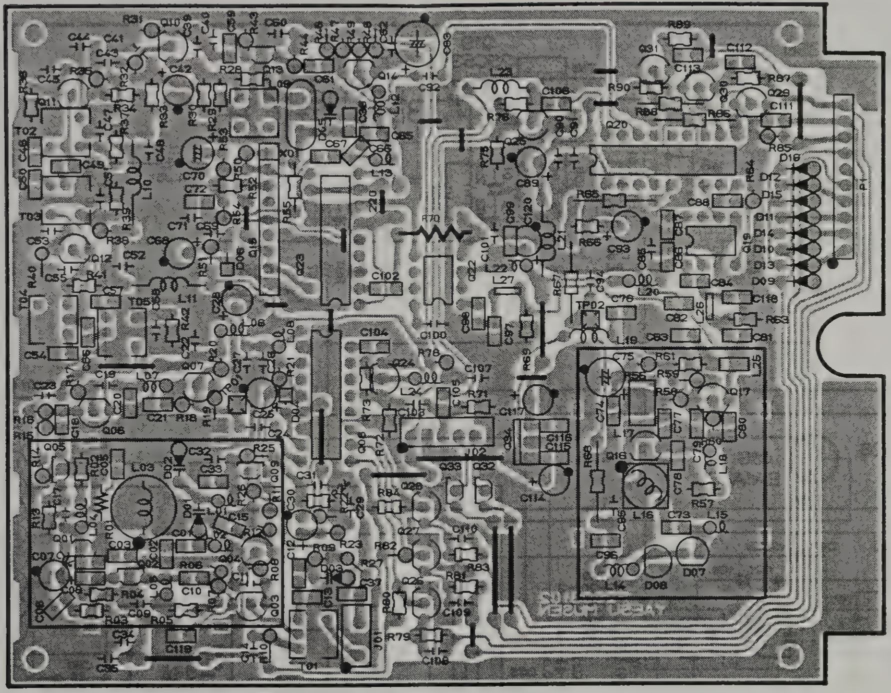
220MHz PL TAGE CHART

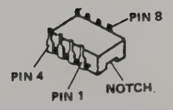
(DC VOLTS)

	E(S)	C(D)	B (G₁)	(G₂)	RE	2	13	14	15	16	17	18	19	20	REMARKS
Q1001	0.64	8.32	0			8	—	—	—	—	3.94	0			
Q1002	0	8.53	0												
Q1003	1.38	8.64	1.77												
Q1004	0	0.06	0.71			0	0.70	0.12	—	—	2.19	—	2.16	5.07	
Q1005	0	4.63	0												
Q1006	0.97	6.00	1.58				0	0	0	0	0	0.30	0		
Q1007	0.73	5.33	1.46												
Q1010	2.44	8.51	3.04												
Q1011	1.15	8.70	1.74												
Q1012	0.95	8.77	1.63												
Q1013	0	4.74	0												
Q1014	1.05	5.21	1.62												

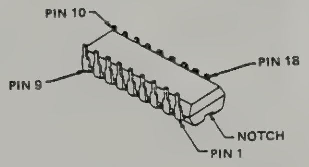
220MHz BAND MODULE (FEX-736-220) OPTION

220MHz PLL UNIT (No. ×××)

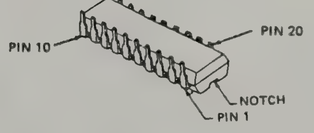




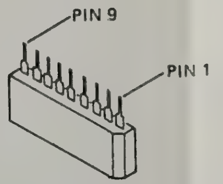
MB504(Q1019)
MB505-16(Q1022)



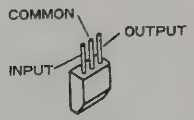
TC9122P(Q1023)
MC145155P(Q1008)



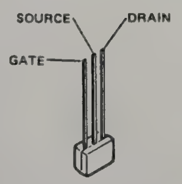
MC145156P(Q1020)



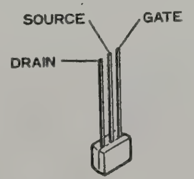
TC5081AP(Q1015)



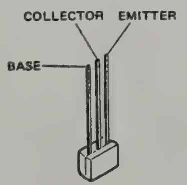
μPC78L05(Q1034)



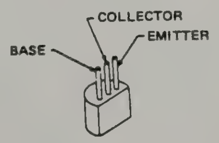
2SK192AGR(Q1001)
2SK241GR
(Q1002,1005,1013)



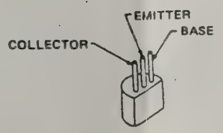
2SK507F(Q1016)



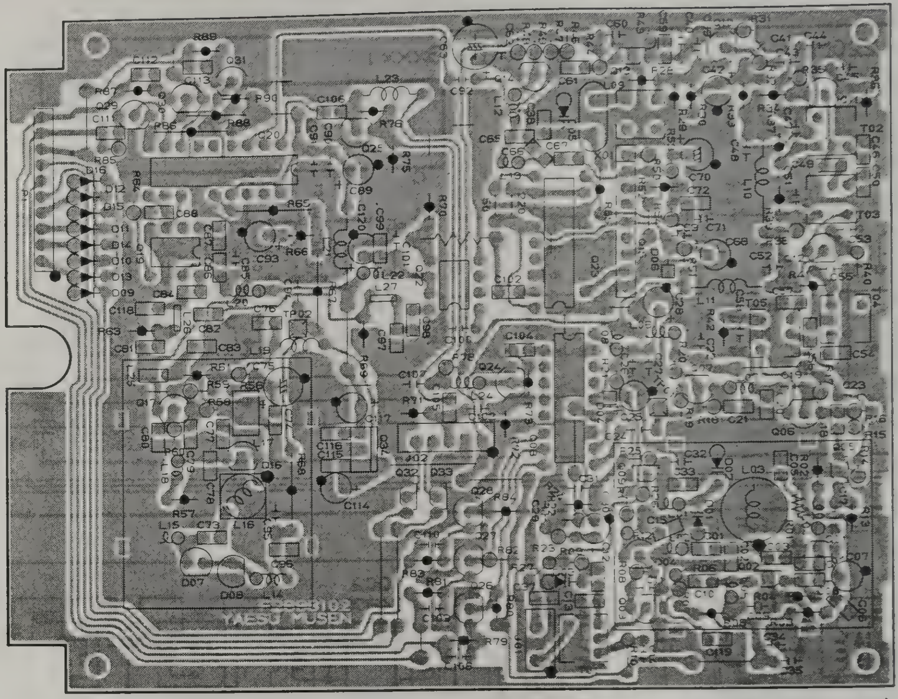
BA1A4P
(Q1032,1033)



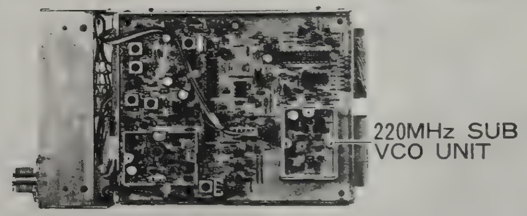
2SC458C
(Q1004,1024,1025
1026,1027,1028
1029,1030,1031)
2SC460B
(Q1007,1010)
2SC535B
(Q1003,1006,1011
1012,1014)



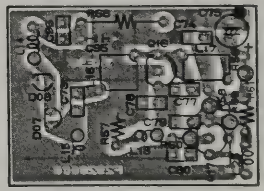
2SC3355(Q1017)



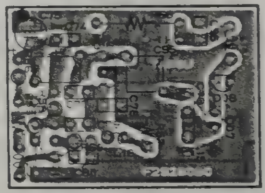
Component side (reverse)



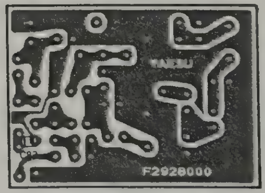
220MHz SUB VCO UNIT (No. 1×××)



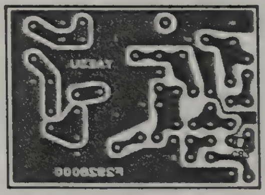
Component side (obverse)



Component side (reverse)

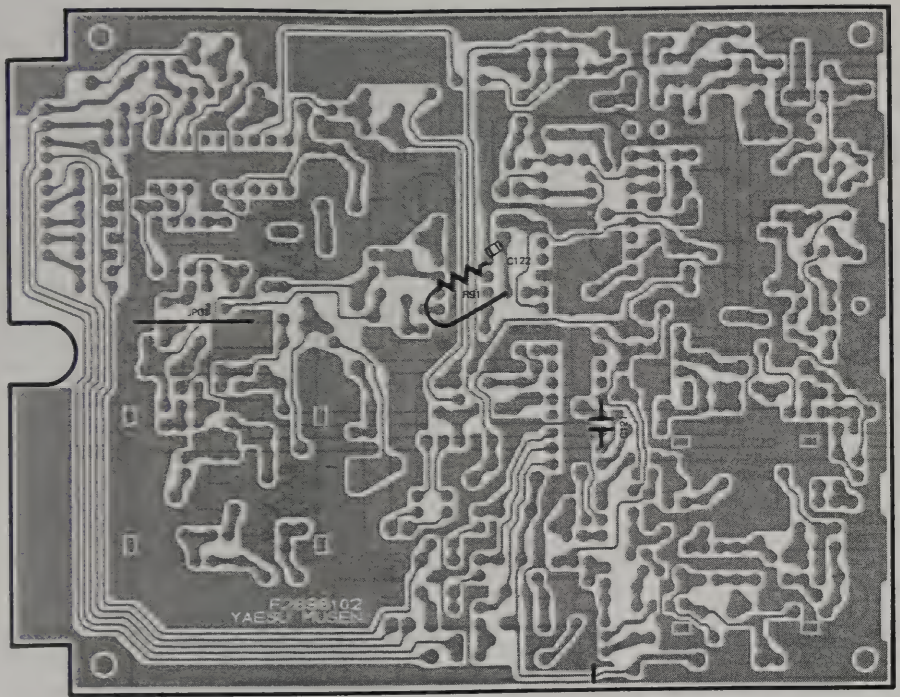


Solder side (obverse)

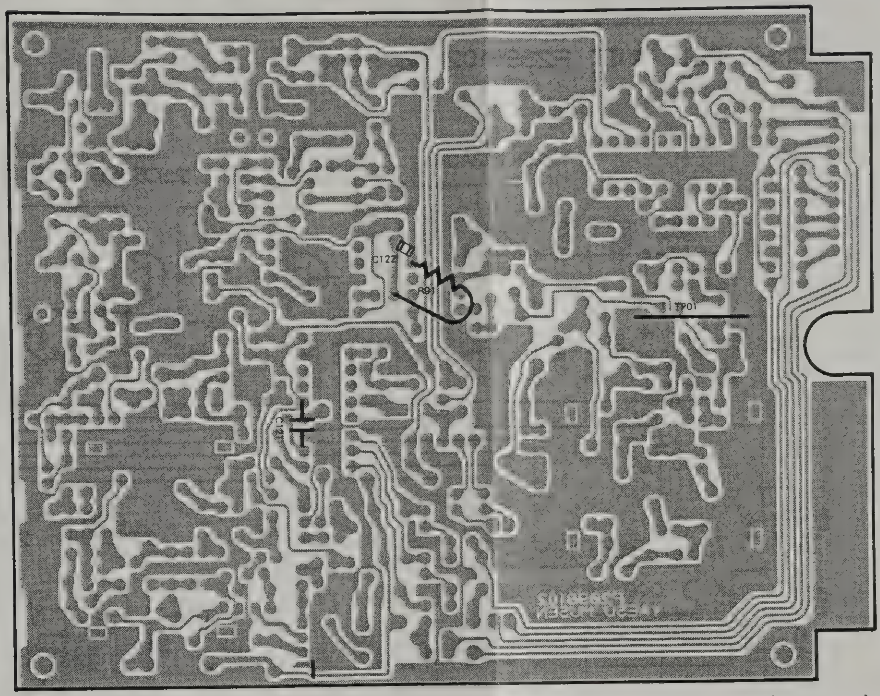


Solder side (reverse)

220MHz BAND MODULE(FEX-736-220) OPTION



Solder side (obverse)



Solder side (reverse)

220MHz PLL UNIT VOLTAGE CHART

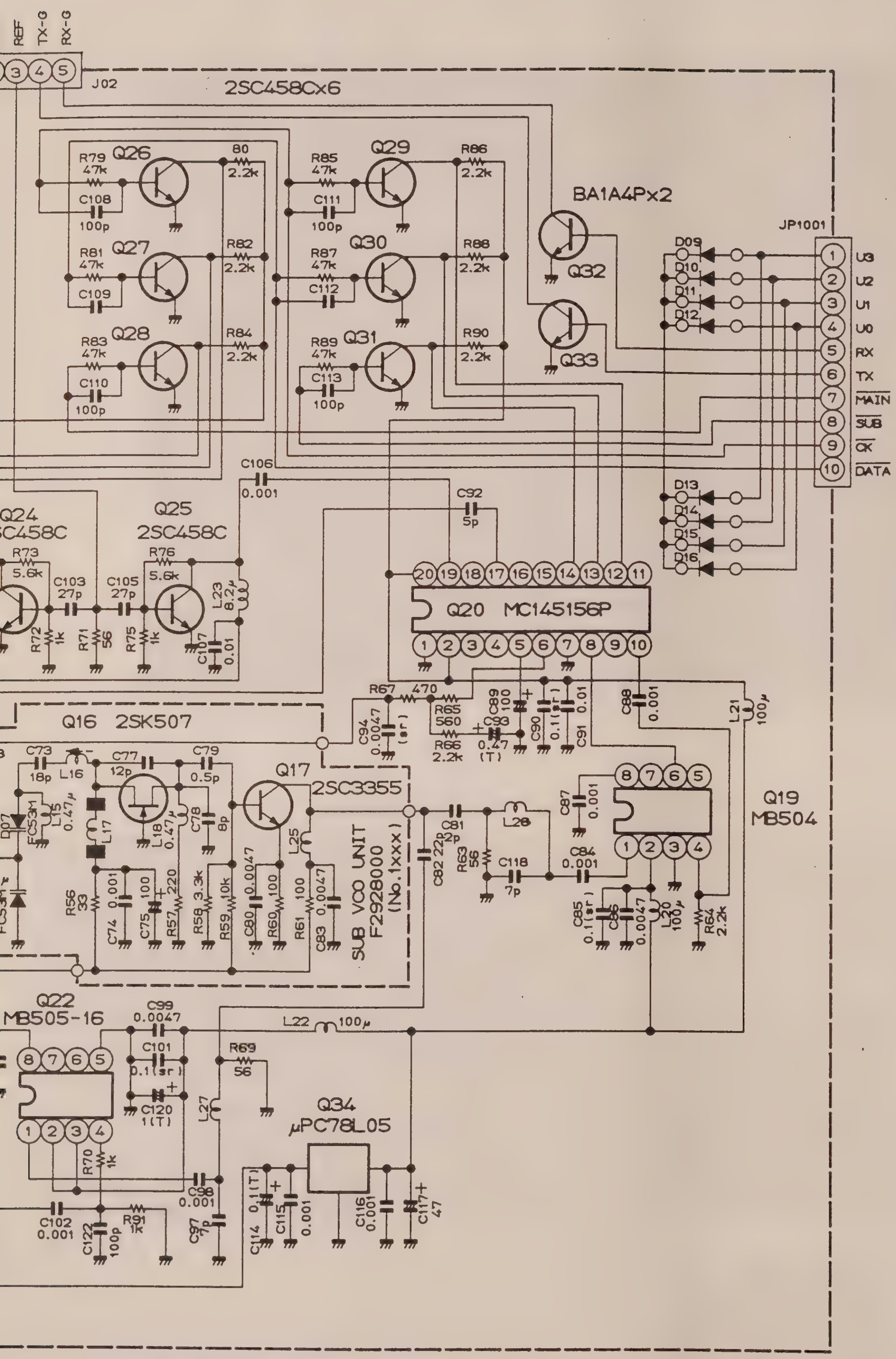
(DC VOLTS)

	E(S)	C(D)	B (G₁)	(G₂)	REMARKS		E(S)	C(D)	B (G₁)	(G₂)	REMARKS
Q1001	0.64	8.32	0			Q1016	1.17	8.67	0		
Q1002	0	8.53	0			Q1017	1.08	7.81	1.86		
Q1003	1.38	8.64	1.77			Q1024	0	5.08	0.70		
Q1004	0	0.06	0.71			Q1025	0	4.55	0.67		
Q1005	0	4.63	0			Q1026	0	0.09	0.69		
Q1006	0.97	6.00	1.58			Q1027	0	0.09	0.69		
Q1007	0.73	5.33	1.46			Q1028	0	0.09	0.09		
Q1010	2.44	8.51	3.04			Q1029	0	0.07	0.68		
Q1011	1.15	8.70	1.74			Q1030	0	0.07	0.68		
Q1012	0.95	8.77	1.63			Q1031	0	0.07	0.68		
Q1013	0	4.74	0			Q1032	0	0.14/8.93	4.73/0		RX/TX
Q1014	1.05	5.21	1.62			Q1033	0	8.93/0.27	0/4.73		RX/TX

220MHz PLL ULIT IC VOLTAGE CHART

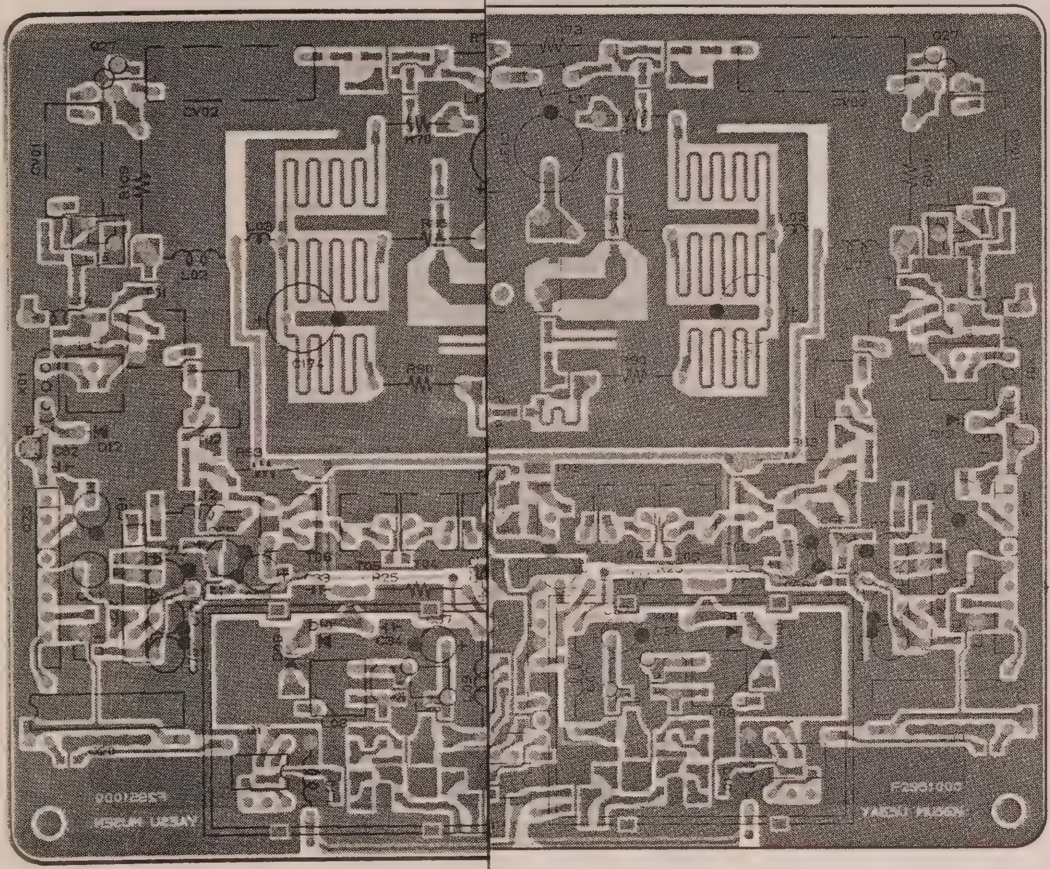
(DC VOLTS)

	1(IN)	2(OUT)	3(GND)	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	REMARKS
Q1008	8.53	0	—	—	8.53	4.60	0	8.47	3.68	0.08	0.08	0.08	—	—	—	—	3.94	0			
Q1015	3.28	3.19	7.43	—	7.53	—	3.28	0.30	0												
Q1019	2.42	4.96	0	2.83	—	4.39	—	2.43													
Q1020	0	5.03	—	—	5.01	5.06	0	4.37	—	2.08	—	0.70	0.70	0.12	—	—	2.19	—	2.16	5.07	
Q1022	2.41	4.91	5.01	2.51	0	—	—	2.43													
Q1023	7.52	2.93	0	0	0	7.53	0	7.53	0	0	7.53	0	0	0	0	0	0	0.30	0		
Q1034	8.88	5.01	0																		

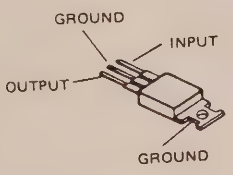


DIODES ARE TYPE 1SS270 UNLESS OTHERWISE NOTED.
(T)CAPACITORS ARE TANTALUM.
(sr)CAPACITORS ARE SEMICONDUCTOR CERAMIC. 25wv:

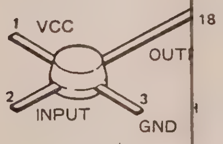
1200MHz PLL UNIT (No. 1 XXX)



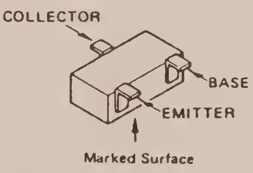
Component side (reverse)



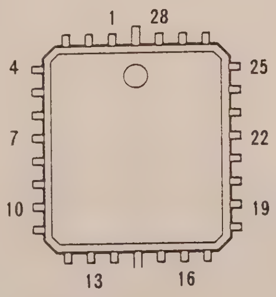
µPC7805H (Q1041)



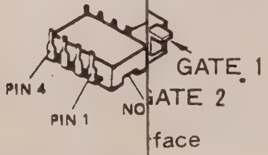
µPC1651G
(Q1027,1030)



2SA812 (M6) (Q1032)
2SC1623 (L6)
(Q1001,1002,1003
1004,1005,1006
1007,1008,1009
1010,1018)
2SC2620 (QB)
(Q1021,1024,1039
1040)
2SC2712 (LG)
(Q1009,1010,1035)
2SC3120 (HB)
(Q1014,1015,1016
1026)
2SC3356 (R22) (Q1034)

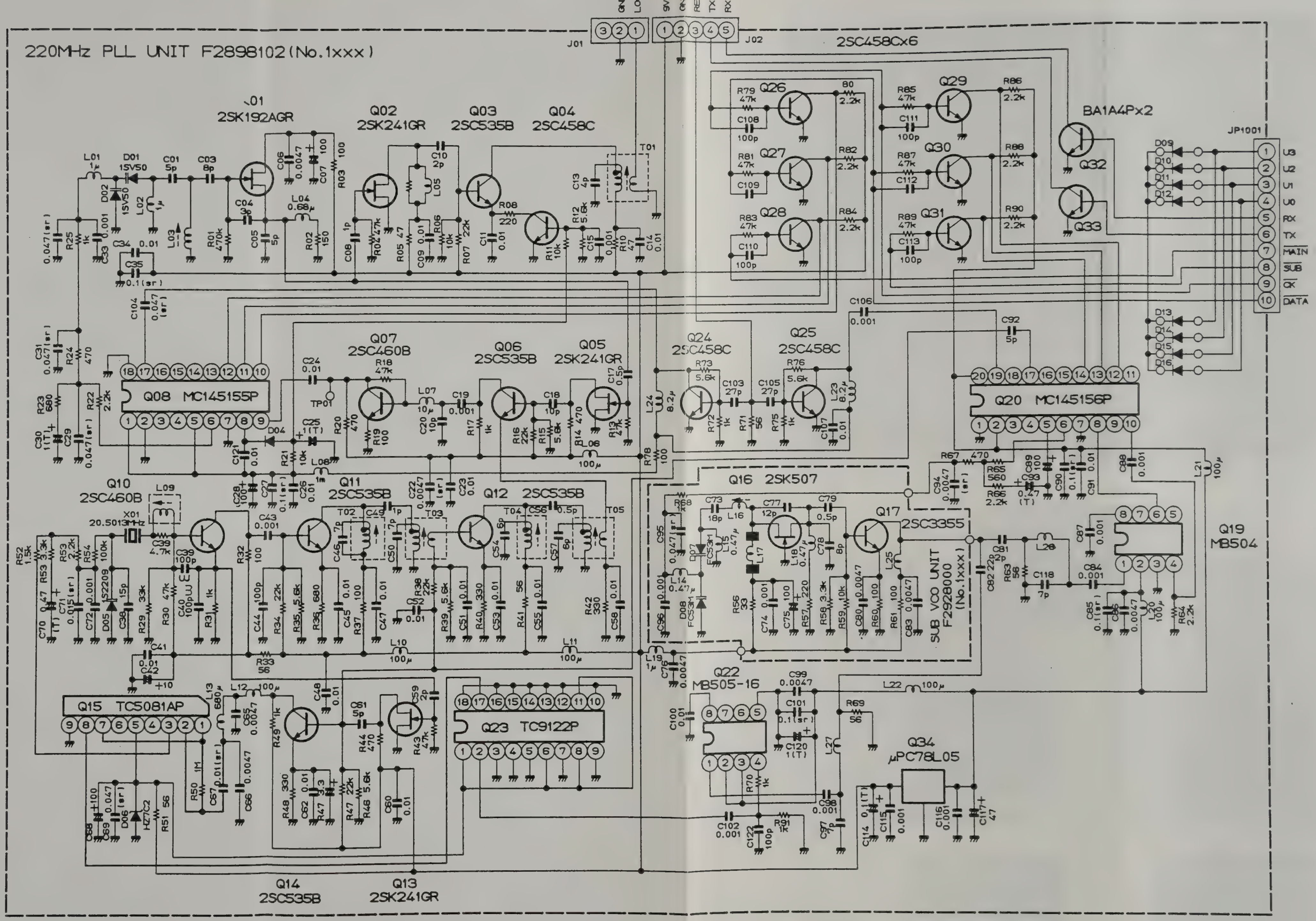


MC145163SL (Q1036)



MB503 (Q1Q1029)
MB504L (Q1
µPB551C (Q1

220MHz BAND MODULE(FEX-736-220) OPTION

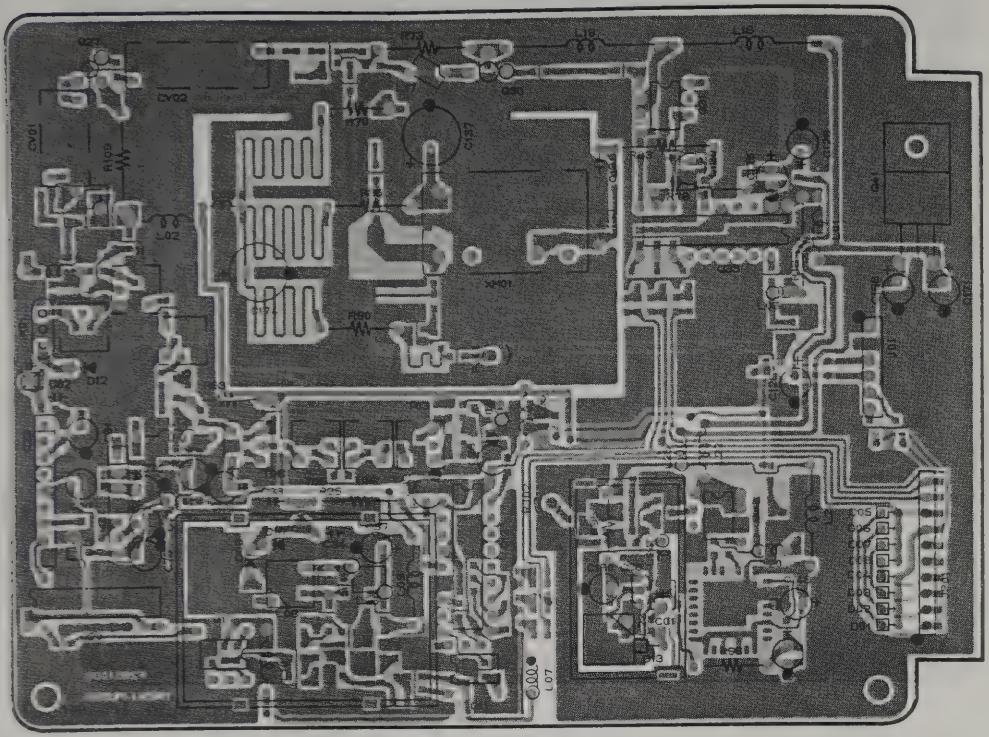


RFSISTOR VALUES ARE IN Ω. 1/6W:
CAPACITOR VALUES ARE IN μF.
INDUCTOR VALUES ARE IN HENRIES. UNLESS OTHERWISE NOTED.

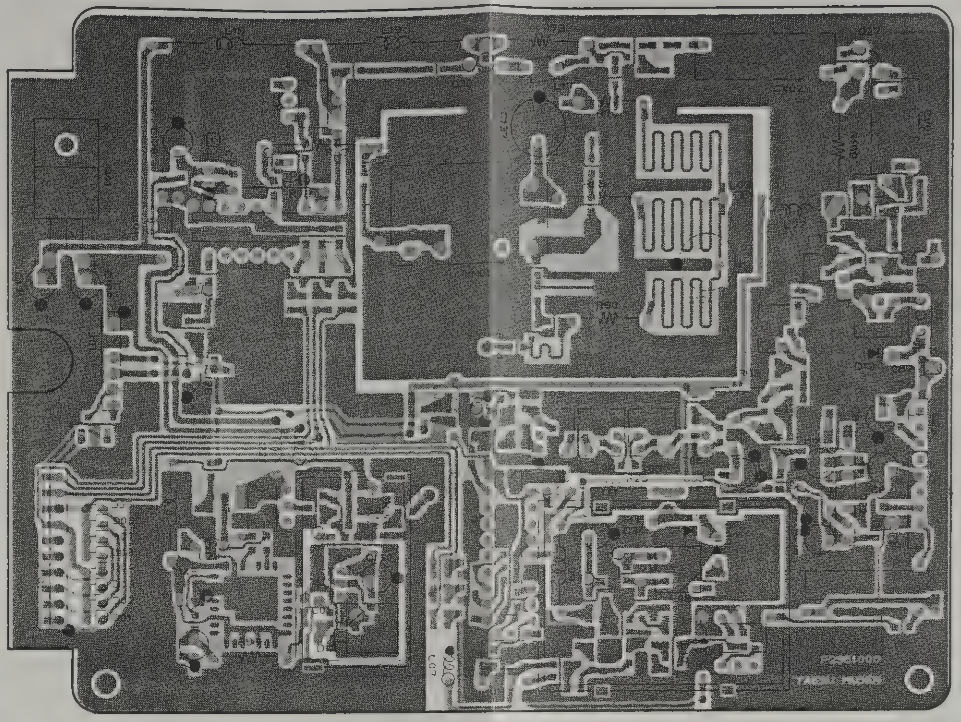
DIODES ARE TYPE 1SS270 UNLESS OTHERWISE NOTED.
(T)CAPACITORS ARE TANTALUM.
(sr)CAPACITORS ARE SEMICONDUCTOR CERAMIC. 25wv:

1200MHz BAND MODULE (FEX-736-1.2) OPTION

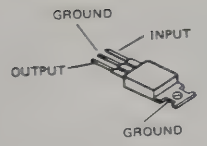
1200MHz PLL UNIT (No.1XXX)



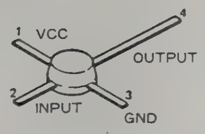
Component side (obverse)



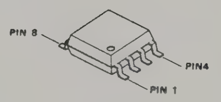
Component side (reverse)



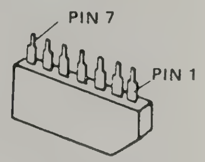
µPC7805H (Q1041)



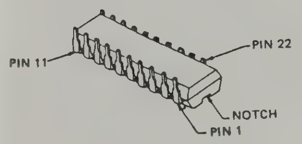
µPC1651G
(Q1027,1030)



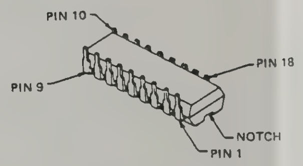
µPC1659G (Q1028)



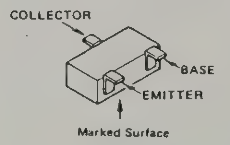
µPC577H (Q1022)



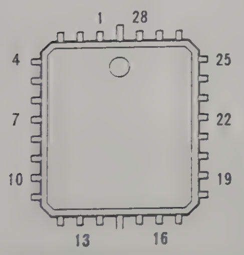
M145156P
(Q1012,1033)



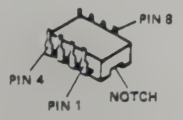
MB505-16 (Q1017)
TC9122P (Q1020)



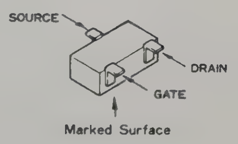
2SA812 (M6) (Q1032)
2SC1623 (L6)
(Q1001,1002,1003
1004,1005,1006
1007,1008,1009
1010,1018)
2SC2620 (QB)
(Q1021,1024,1039
1040)
2SC2712 (LG)
(Q1009,1010,1035)
2SC3120 (HB)
(Q1014,1015,1016
1026)
2SC3356 (R22) (Q1034)



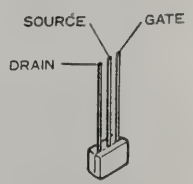
MC145163SL (Q1036)



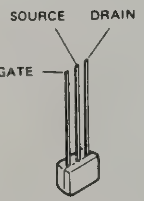
MB503 (Q1031)
MB504L (Q1011)
µPB551C (Q1037)



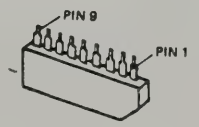
2SK302Y (TY)
(Q1019,1025)



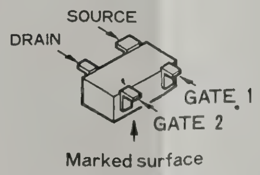
2SK507F (Q1013)



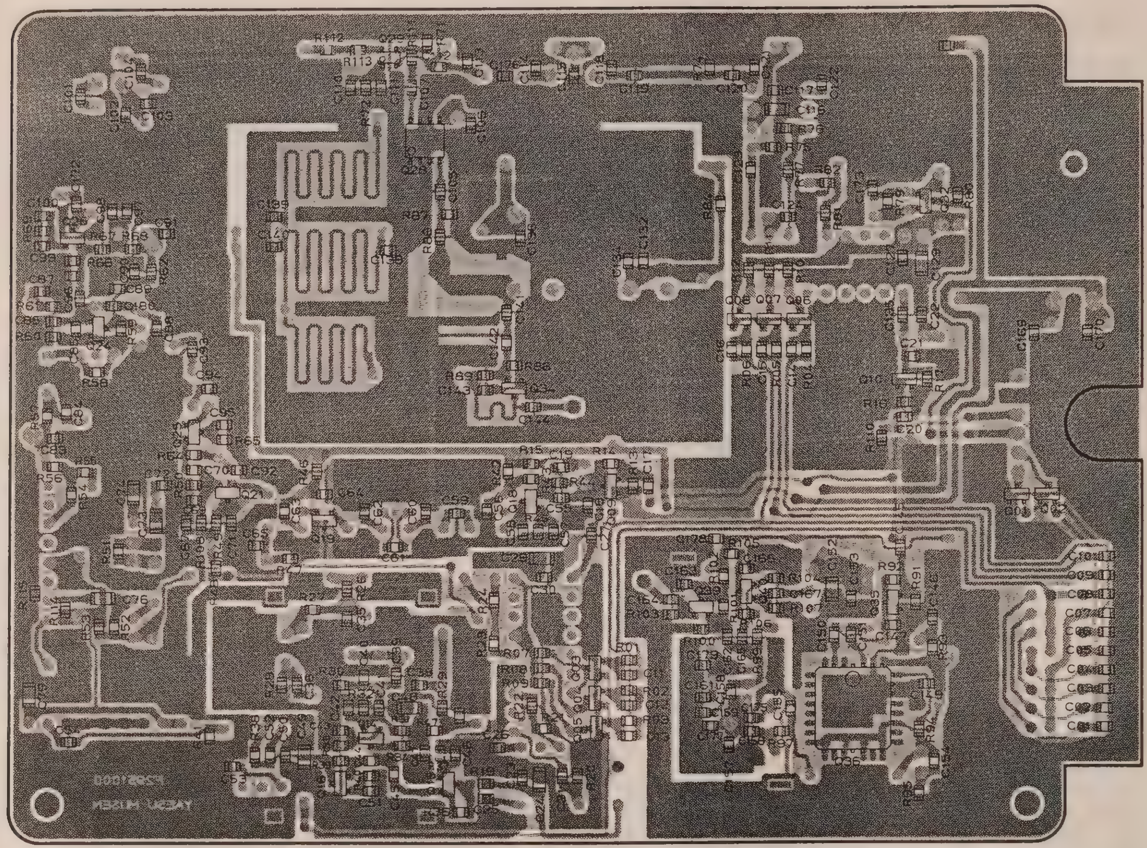
2SK192AGR (Q1038)



TC5081AP (Q1023)



3SK165 (J0) (Q1029)



Chip side (reverse)

1200MHz PLL UNIT IC VOLTAGE CHART

(DC VOLTS)

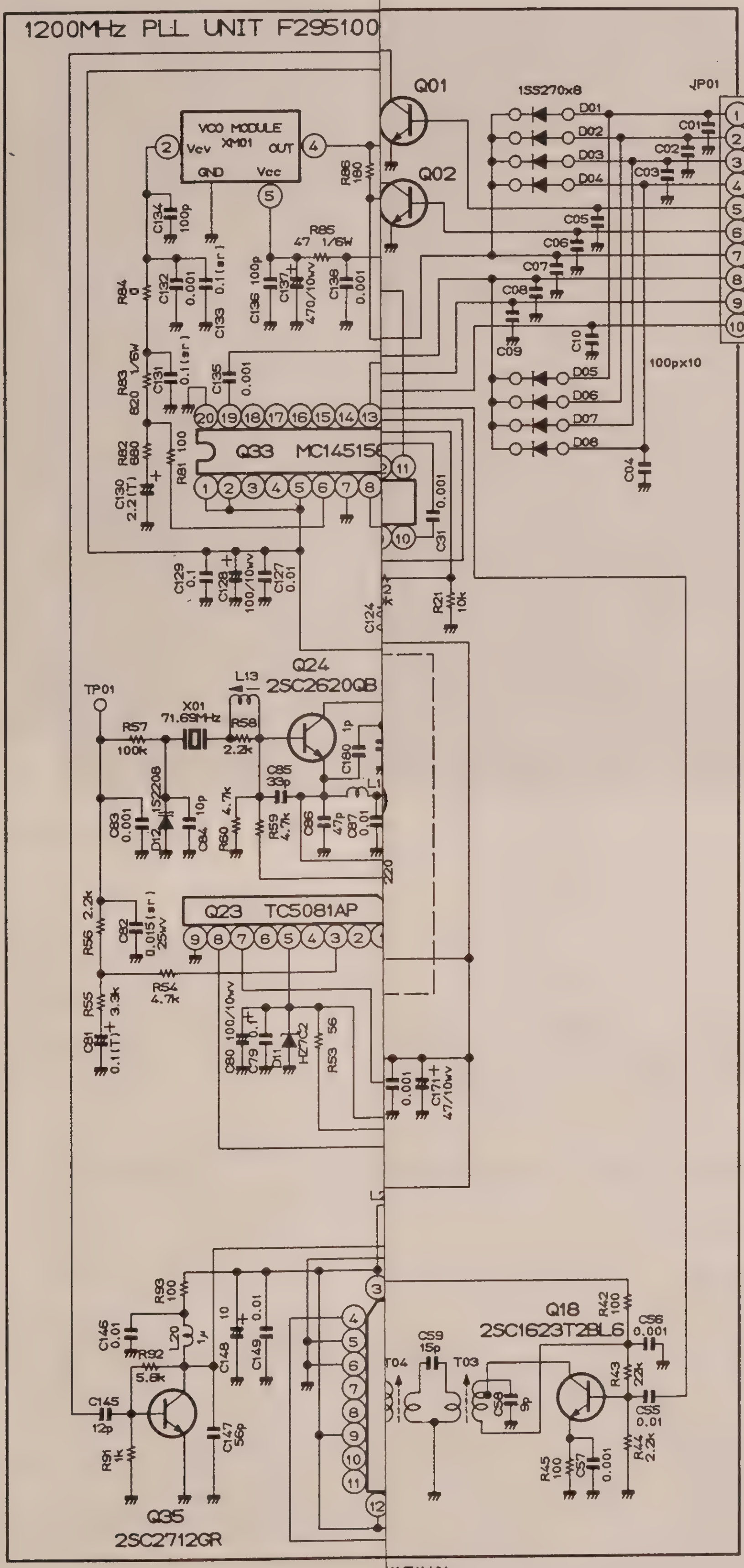
	1(IN)	2(GND)	3(OUT)	4	5	6	7	8	9	10	REMARKS
1011	2.37	4.96	0	2.74	0	3.20	—	2.39			
1017	2.35	2.35	4.95	0	2.52	0	—	—	2.35		
1022	5.15	1.79	1.79	0	4.30	1.94	8.69				
1023	—	—	2.00	—	7.52	—	3.70	0.63	0		
1027	0.89	5.57	0	3.18							
1028	0.74	0	0	0	5.79	0	0	8.62			
1030	0.88	4.77	0	3.07							
1031	2.37	4.87	4.87	2.80	0	3.49	—	2.37			
1037	4.83	3.21	0	0	2.35	0	4.83				
1041	8.87	0	5.00								

1200MHz PLL UNIT IC VOLTAGE CHART

(DC VOLTS)

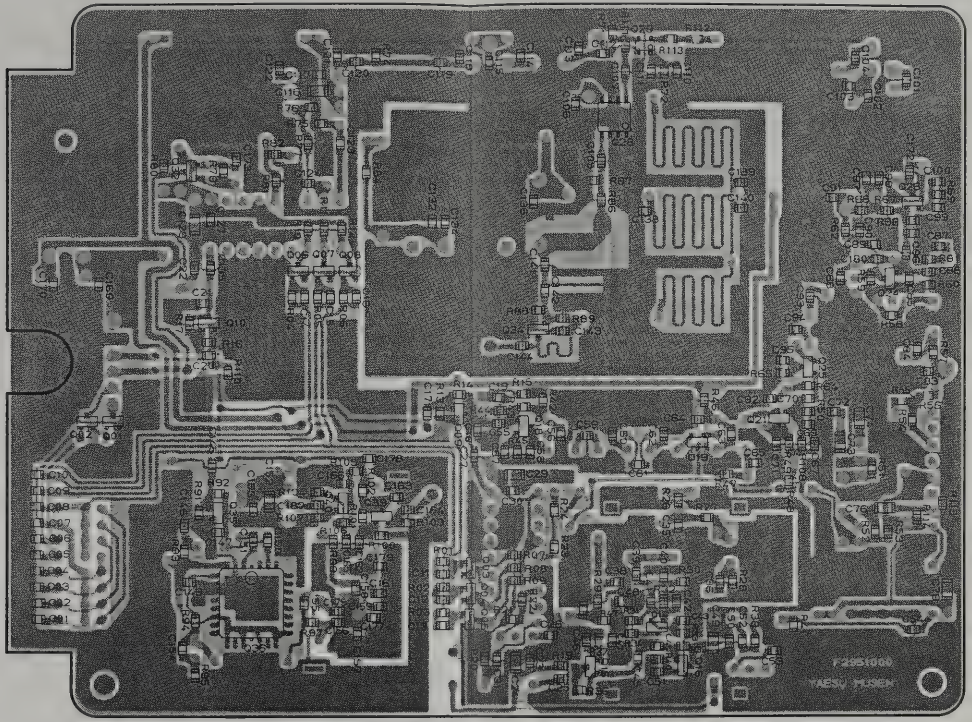
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1012	0	8.54	—	—	8.54	1.24	0	7.50	—	3.91	0.05	0.05	0.05	—	—	—	—	—	3.76
1020	7.52	0	0	0	0	0	0	7.52	7.52	0	0	0	0	0	0	0	0.63	0	
1033	7.80	7.80	—	—	7.80	4.42	0	7.61	7.74	3.53	0.05	0.05	0.05	—	—	—	—	4.22	3.49
1036	4.26	0	8.63	5.38	0	0	—	—	8.63	—	—	8.63	—	8.63	8.03	—	8.63	8.63	—
	20	21	22	23	24	25	26	27	28										
1012	8.85																		
1020																			
1033	0																		
1036	—	—	—	—	—	—	—	4.19	—										

(FEX-736-1.2) OPTION

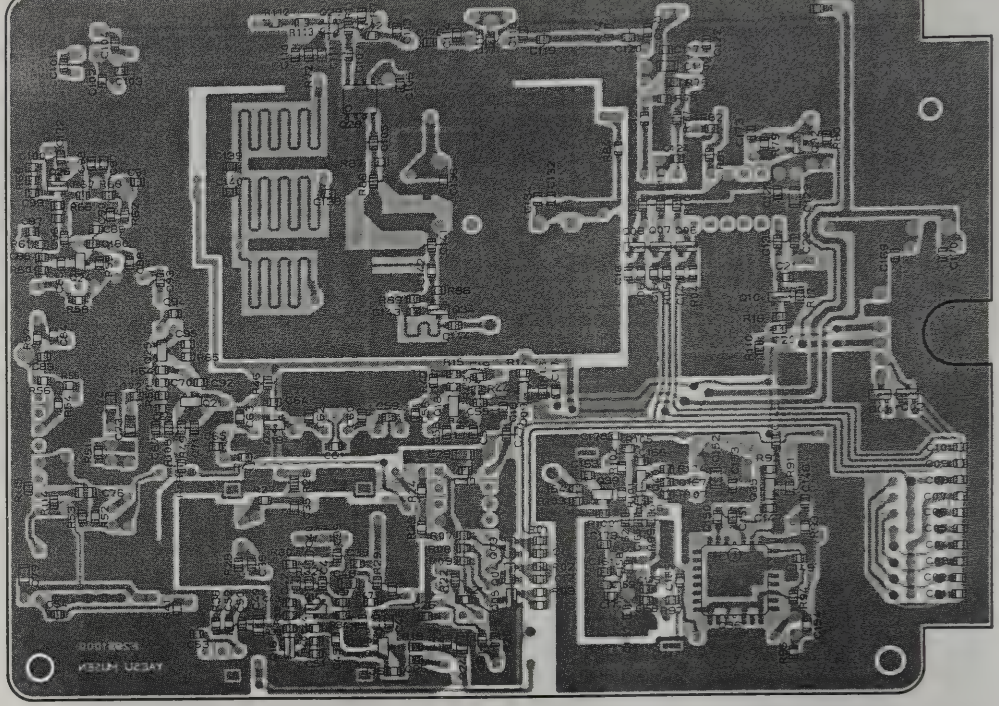


ANTALUM.
SEMICONDUCTOR CERAMIC. 25wv.
OTED.

1200MHz BAND MODULE (FEX-736-1.2) OPTION



Chip side (obverse)



Chip side (reverse)

1200MHz PLL UNIT VOLTAGE CHART (DC VOLTS)

	E(S)	C(D)	B (G_1)	B (G_2)	REMARKS		E(S)	C(D)	B (G_1)	B (G_2)	REMARKS
Q1001	0	0.10/8.70	0.81/0		RX/TX	Q1018	1.17	7.10	0.45		
Q1002	0	8.90/0.01	0		RX/TX	Q1019	0	8.2	0		
Q1003	0	0.05	5.60			Q1021	0.94	7.80	1.60		
Q1004	0	0.05	5.60			Q1024	3.40	8.50	4.10		
Q1005	0	0.05	5.60			Q1025	0.46	8.30	0		
Q1006	0	0.05	5.60			Q1026	0.84	8.60	1.50		
Q1007	0	0.05	5.60			Q1029	1.58	4.60	0	0	
Q1008	0	0.05	5.60			Q1032	7.78	0	0.74		
Q1009	0	5.02	0.67			Q1034	0	5.00	0.75		
Q1010	0	5.02	0.68			Q1035	0	5.30	0.68		
Q1013	1.06	8.65	0			Q1038	1.77	8.28	0		
Q1014	1.29	4.57	2.02			Q1039	2.93	8.16	3.67		
Q1015	0.41	3.10	1.14			Q1040	3.43	8.62	4.14		
Q1016	0.52	2.64	1.25								

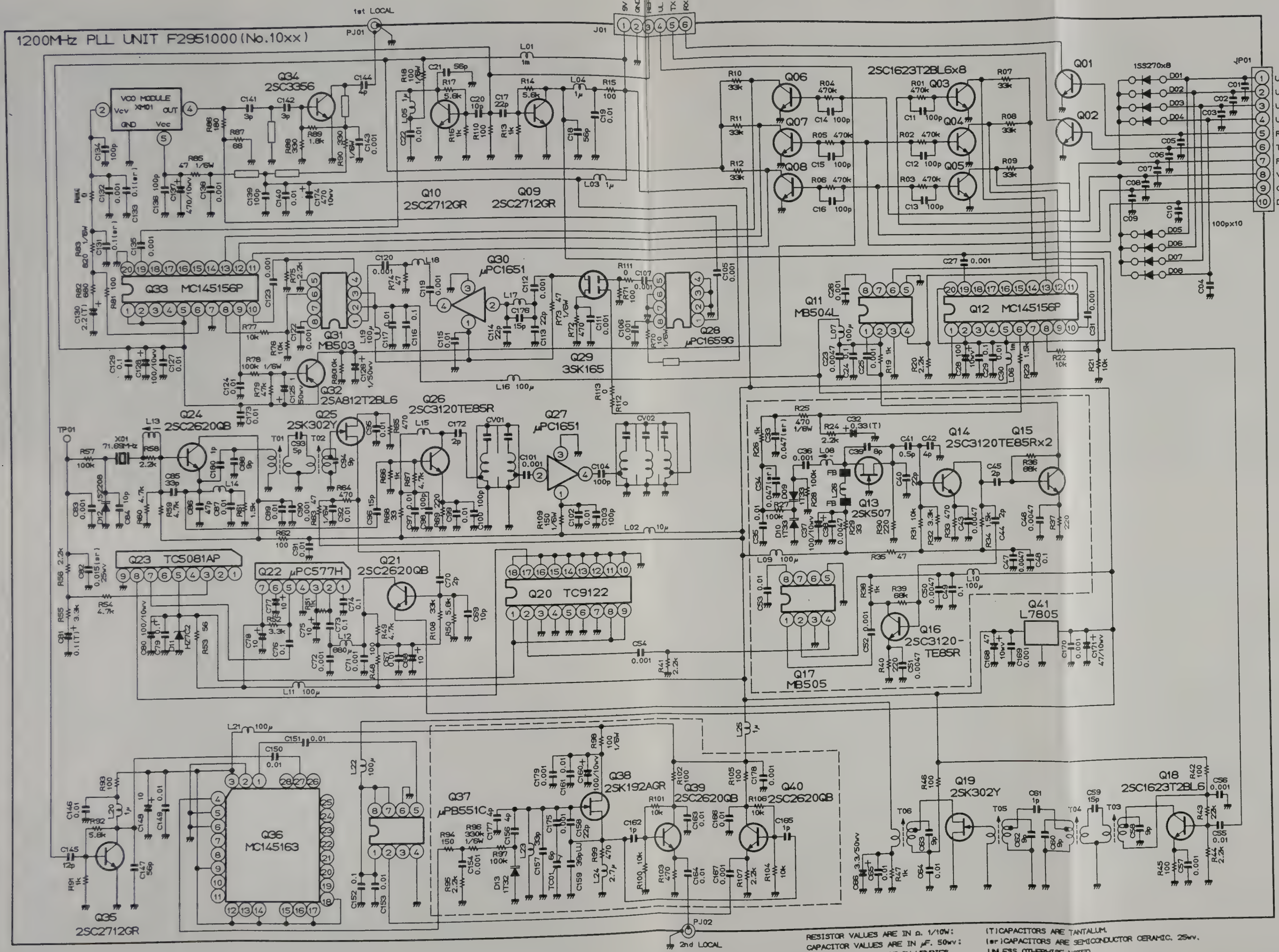
1200MHz PLL UNIT IC VOLTAGE CHART (DC VOLTS)

	1(IN)	2(GND)	3(OUT)	4	5	6	7	8	9	10	REMARKS
Q1011	2.37	4.96	0	2.74	0	3.20	—	2.39			
Q1017	2.35	2.35	4.95	0	2.52	0	—	—	2.35		
Q1022	5.15	1.79	1.79	0	4.30	1.94	8.69				
Q1023	—	—	2.00	—	7.52	—	3.70	0.63	0		
Q1027	0.89	5.57	0	3.18							
Q1028	0.74	0	0	0	5.79	0	0	8.62			
Q1030	0.88	4.77	0	3.07							
Q1031	2.37	4.87	4.87	2.80	0	3.49	—	2.37			
Q1037	4.83	3.21	0	0	2.35	0	4.83				
Q1041	8.87	0	5.00								

1200MHz PLL UNIT IC VOLTAGE CHART (DC VOLTS)

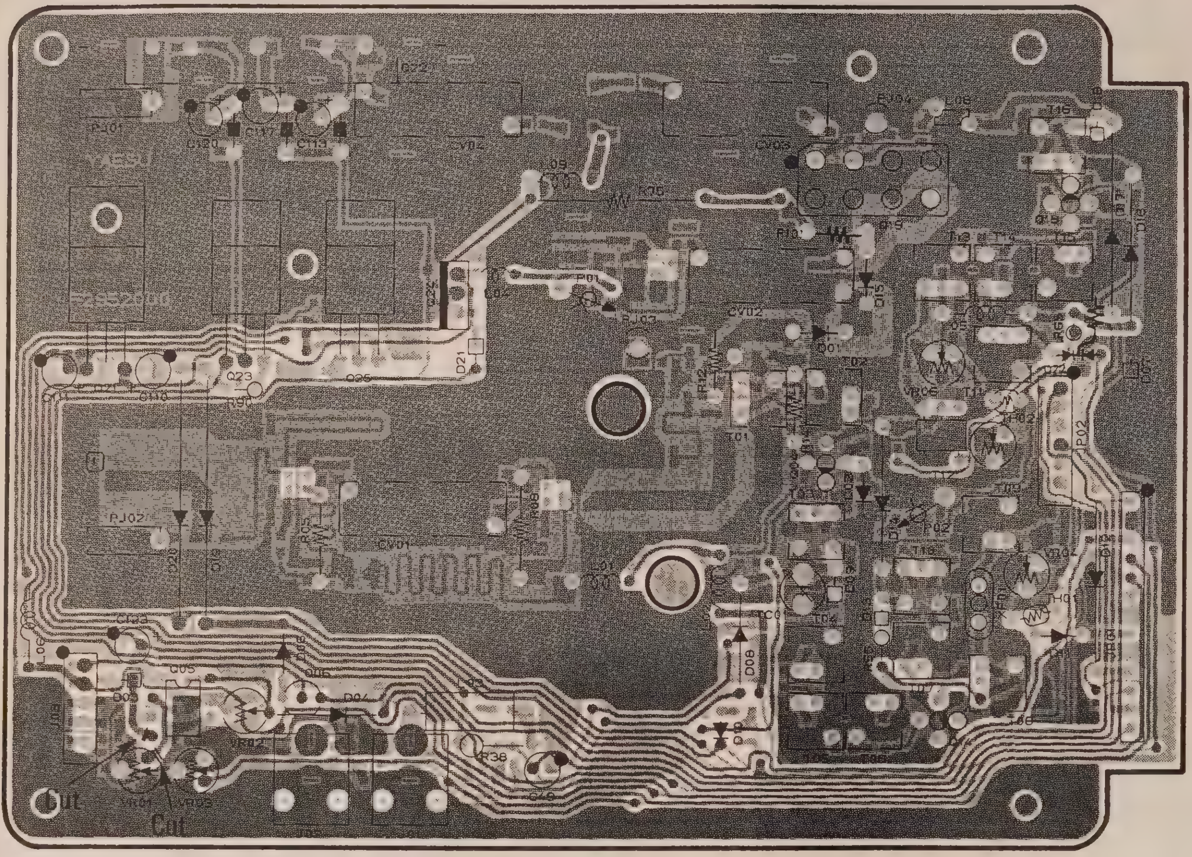
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Q1012	0	8.54	—	—	8.54	1.24	0	7.50	—	3.91	0.05	0.05	0.05	—	—	—	—	—	3.76
Q1020	7.52	0	0	0	0	0	0	7.52	7.52	0	0	0	0	0	0	0	0.63	0	
Q1033	7.80	7.80	—	—	7.80	4.42	0	7.61	7.74	3.53	0.05	0.05	0.05	—	—	—	—	4.22	3.49
Q1036	4.26	0	8.63	5.38	0	0	—	—	8.63	—	—	8.63	—	8.63	8.03	—	8.63	8.63	—
	20	21	22	23	24	25	26	27	28										
Q1012	8.85																		
Q1020																			
Q1033	0																		
Q1036	—	—	—	—	—	—	—	4.19	—										

1200MHz BAND MODULE (FEX-736-1.2) OPTION

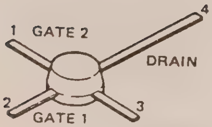


RESISTOR VALUES ARE IN Ω. 1/10W:
CAPACITOR VALUES ARE IN µF. 50wv:
INDUCTOR VALUES ARE IN HENRIES.

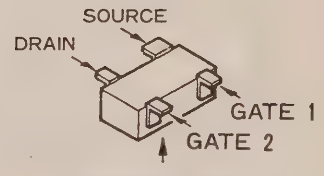
(T)CAPACITORS ARE TANTALUM.
(er)CAPACITORS ARE SEMICONDUCTOR CERAMIC. 25wv.
UNLESS OTHERWISE NOTED.



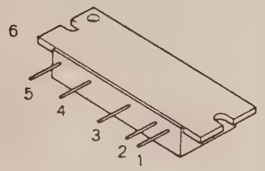
Component side (reverse)



3SK122L
(Q2004,2014,2018)

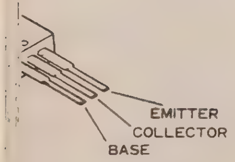


3SK164-0 (F0) (Q2001)
3SK165-0 (J0) (Q2003)

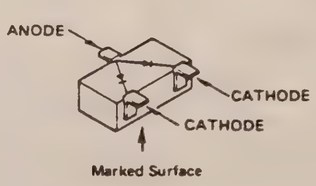


1. INPUT
2. V_{CC1}
3. V_{CC2}
4. V_{CC3}
5. OUTPUT
6. FLA

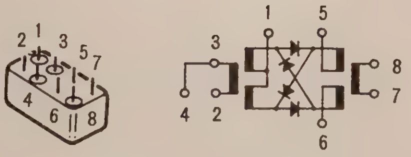
M67715 (Q2022)



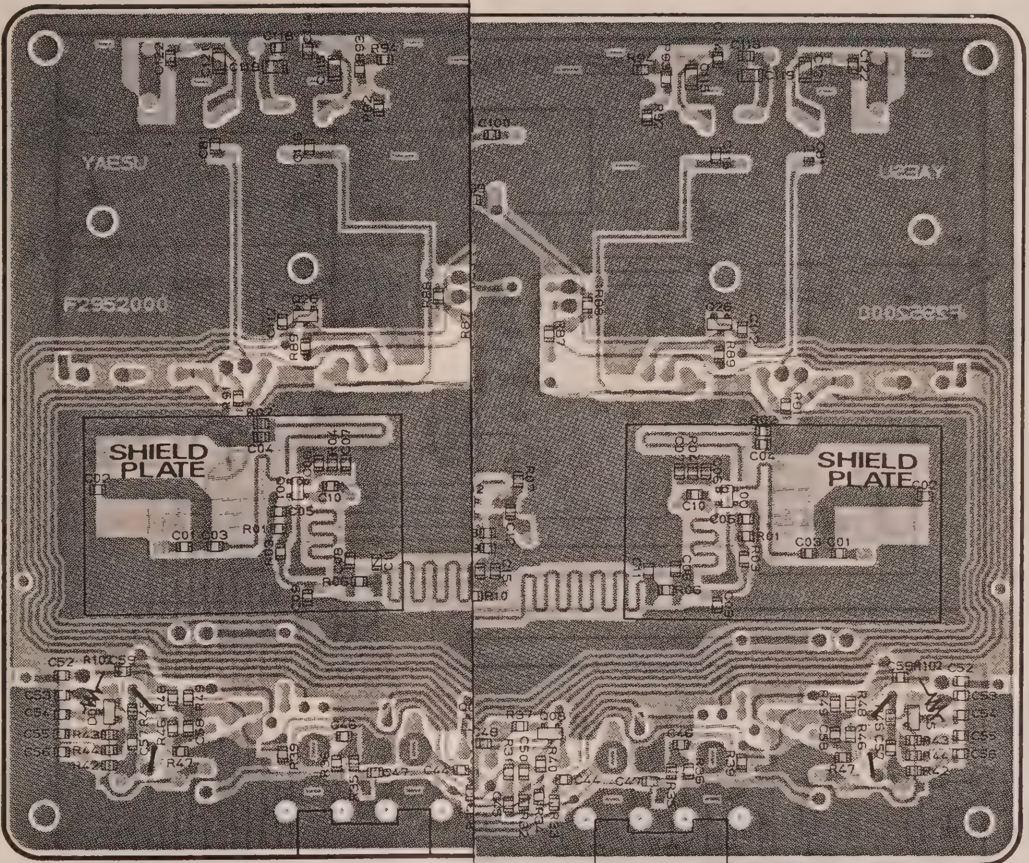
134R (Q2023)
667R (Q2025)



1SS181 (A3) (D2005)



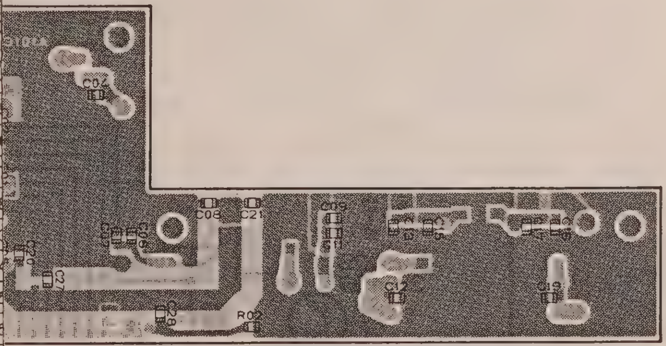
1.RF (IF) 2,5,6,7.CASE GND
3,4.IF (RF) 8.LO
DM-600A24 (Q2019)



Chip side (reverse)

1200MHz RF UNIT VOLT

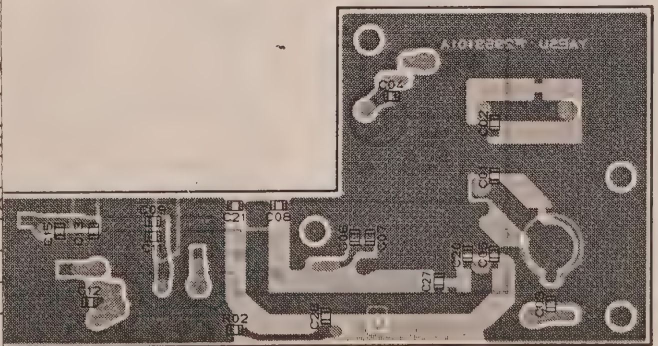
	E(S)	C(D)	B (G₁)	(G₂)	REMARKS	
Q2001	0.78	8.17	0	1.95		Q201
Q2002	0.10	7.78	0.84			Q201
Q2003	1.6	7.2	0	0		Q201
Q2004	1.40	7.80	1.01	2.00		Q201
Q2006	0/12.50	0/12.50	0/0.79		PRE AMP OFF/ON	Q201
Q2007	13.38/13.26	0/13.20	13.38/11.04		W/O TV UNIT/W/TV UNIT	Q201
Q2008	13.30/12.30	0/13.20	13.30/13.14		W/O TV UNIT/W/TV UNIT	Q202
Q2009	0	0	0			Q202
Q2010	8.87/8.80	8.77/8.76	0		W/O TV UNIT/W/TV UNIT	Q202
Q2011	0	0	0/8.41		RX/TX	Q2026
Q2012	0	7.15	0.73			Q2027



Chip side (obverse)

1200MHz RF UNIT IC VOLTA

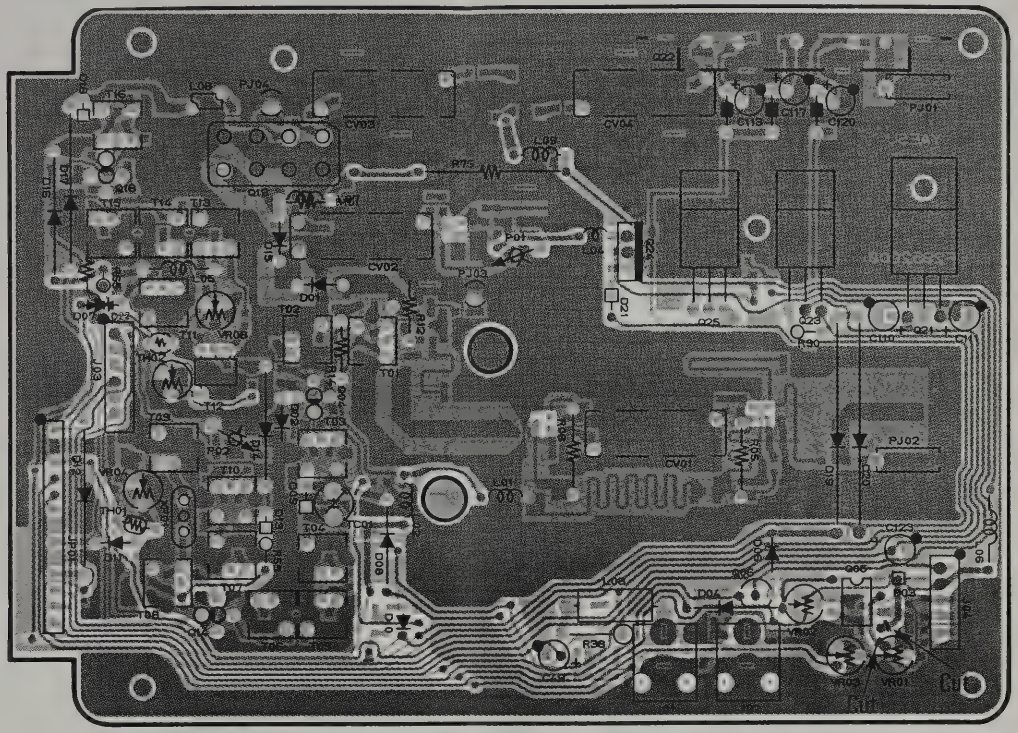
	1(IN)	2(GND)	3(OUT)	4	5	6	7	8
Q2005	1.07	1.90	0	1.84	6.38	6.38	1.00	8.9
Q2019	0	0	0	—	0	0	0	0
Q2020	0.74	0	0	0	5.84	0	0	8.7
Q2021	12.6	0	9.0					
Q2022	—	7.64	7.64	7.64	—			
Q3001	—	13.8	9.0	13.2	—			



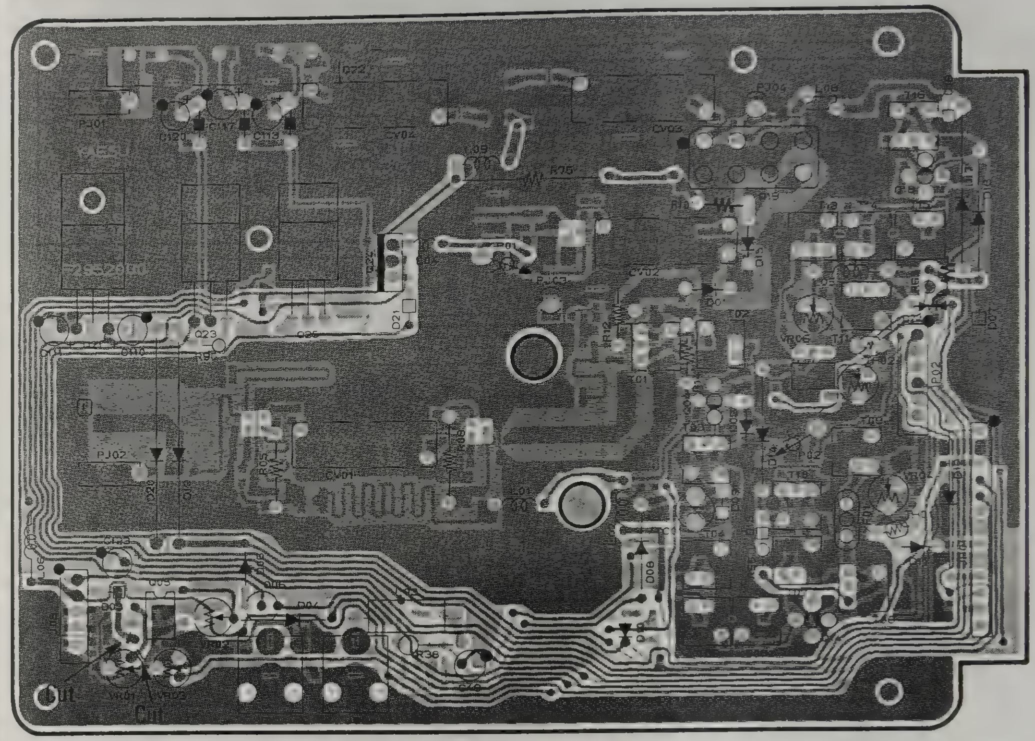
Chip side (reverse)

1200MHz BAND MODULE (FEX-736-1.2) OPTION

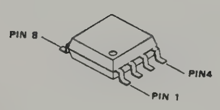
1200MHz RF UNIT (No. 2×××)



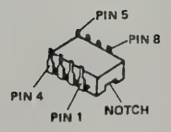
Component side (obverse)



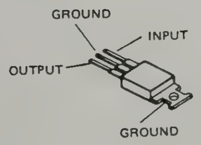
Component side (reverse)



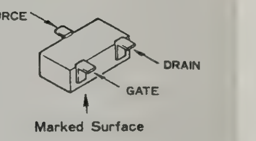
μPC1659G (Q2020)



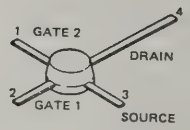
LA6358 (Q2005)



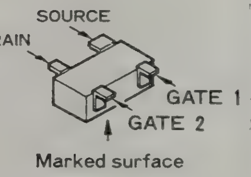
L7809 (Q2021)



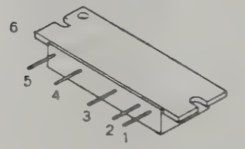
2SK302GR (TG)
(Q2015,2016,2017)



3SK122L
(Q2004,2014,2018)

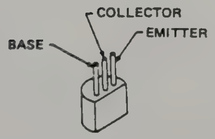


3SK164-0 (F0) (Q2001)
3SK165-0 (J0) (Q2003)

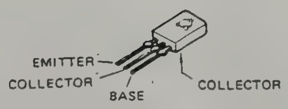


1. INPUT
2. Vcc_1
3. Vcc_2
4. Vcc_3
5. OUTPUT
6. FLA

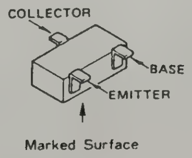
M67715 (Q2022)



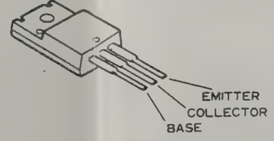
2SA1528 (Q2006)



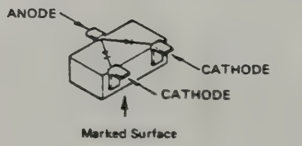
2SB772P (Q2024)



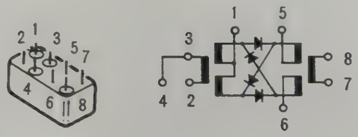
FA1L4L (L30) (Q2027)
FA1L4M (L31) (Q2007,2011)
2SA812 (M6)
(Q2008,2009,2010)
2SC1623 (L6) (Q2026)
2SC2620 (QB) (Q2013)
2SC3356 (R22) (Q2002,2012)



2SB1134R (Q2023)
2SD1667R (Q2025)

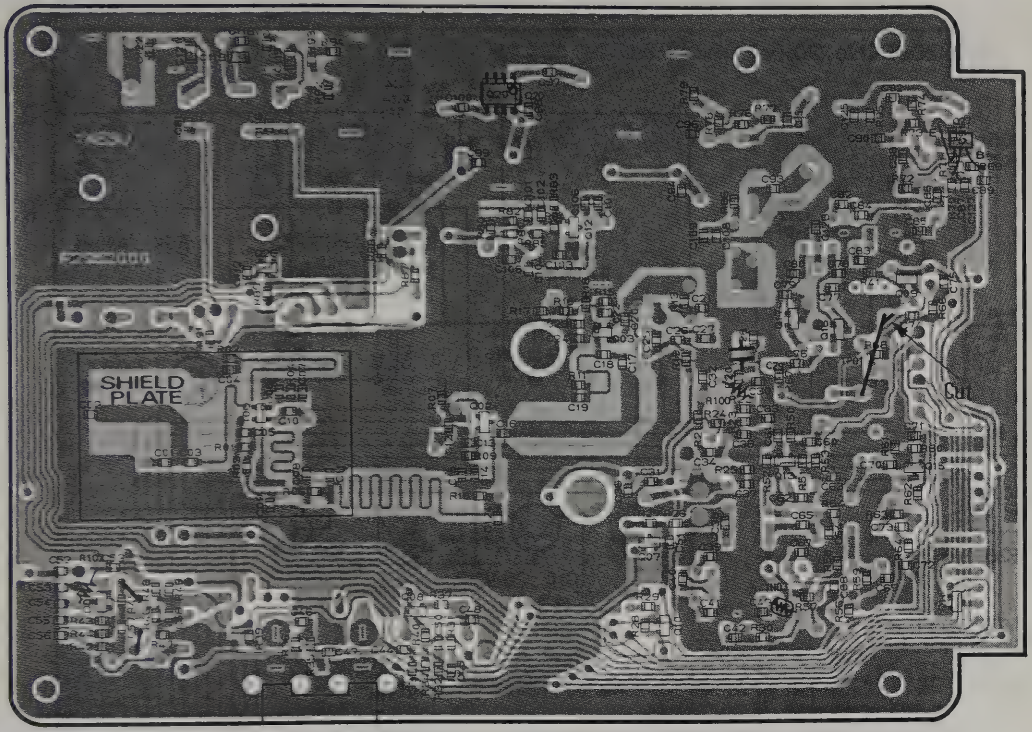


1SS181 (A3) (D2005)

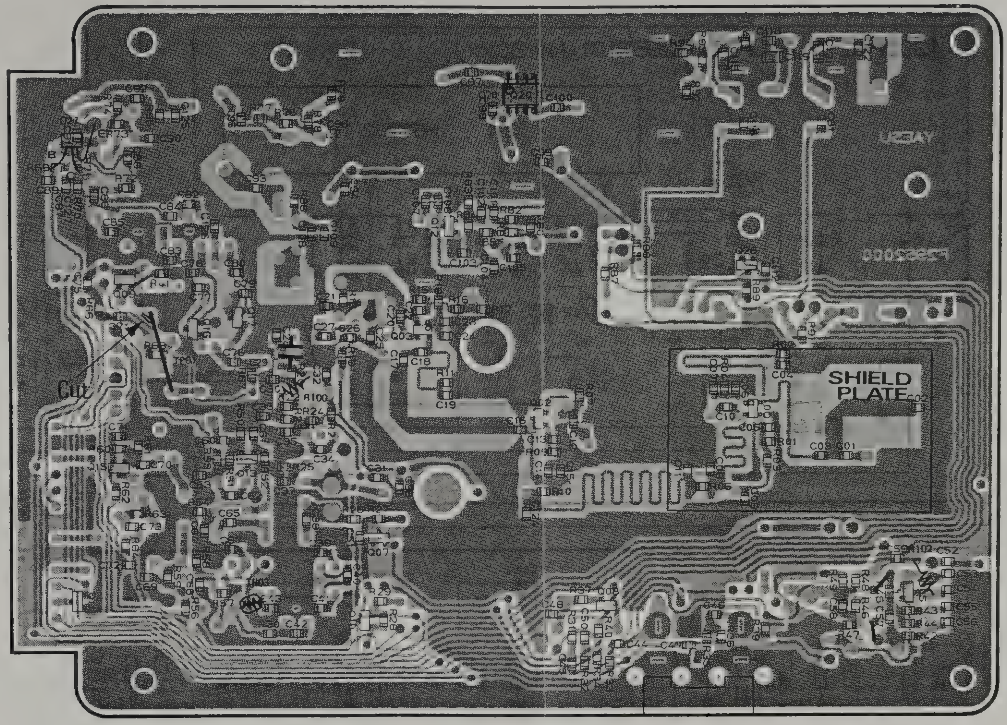


1.RF (IF) 2,5,6,7.CASE GND
3,4.IF (RF) 8.LO
DM-600A24 (Q2019)

1200MHz BAND MODULE (FEX-736-1.2) OPTION



Chip side (obverse)



Chip side (reverse)

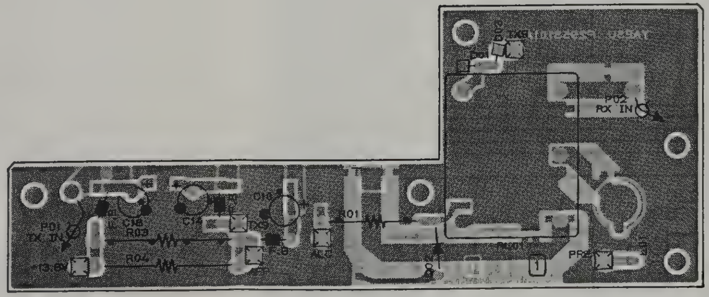
1200MHz RF UNIT VOLTAGE CHART (DC VOLTS)

	E(S)	C(D)	B		REMARKS
			(G_1)	(G_2)	
Q2001	0.78	8.17	0	1.95	
Q2002	0.10	7.78	0.84		
Q2003	1.6	7.2	0	0	
Q2004	1.40	7.80	1.01	2.00	
Q2006	0/12.50	0/12.50	0/0.79		PRE AMP OFF/ON
Q2007	13.38/13.26	0/13.20	13.38/11.04		W/O TV UNIT/W/TV UNIT
Q2008	13.30/12.30	0/13.20	13.30/13.14		W/O TV UNIT/W/TV UNIT
Q2009	0	0	0		
Q2010	8.87/8.80	8.77/8.76	0		W/O TV UNIT/W/TV UNIT
Q2011	0	0	0/8.41		RX/TX
Q2012	0	7.15	0.73		
Q2013	1.24	7.87	1.91		
Q2014	0.13	8.53	0	0	
Q2015	4.16	8.72	4.36		
Q2016	1.0	8.4	0		
Q2017	1.0	8.4	0		
Q2018	1.15	7.63	1.30	3.70	
Q2023	13.4	13.3	12.7		
Q2024	8.97/8.91	0/8.77	8.97/8.13		RX/TX
Q2025	0/7.90	0/8.73	0/8.48		RX/TX
Q2026	0	0	0		
Q2027	0	0/3.70	2.67/1.25		RX/TX

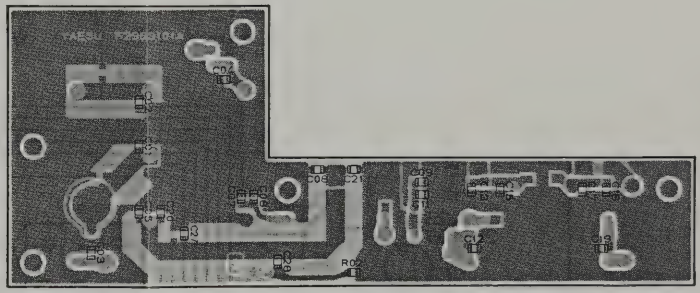
1200MHz RF UNIT IC VOLTAGE CHART (DC VOLTS)

	1(IN)	2(GND)	3(OUT)	4	5	6	7	8	9	10	REMARKS
Q2005	1.07	1.90	0	1.84	6.38	6.38	1.00	8.93			@ 10W output
Q2019	0	0	0	—	0	0	0	0			
Q2020	0.74	0	0	0	5.84	0	0	8.70			
Q2021	12.6	0	9.0								
Q2022	—	7.64	7.64	7.64	—						
Q3001	—	13.8	9.0	13.2	—						@ 10W output

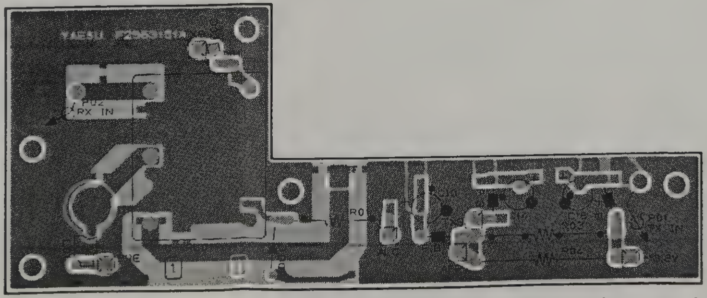
1200MHz PA UNIT (No. 3×××)



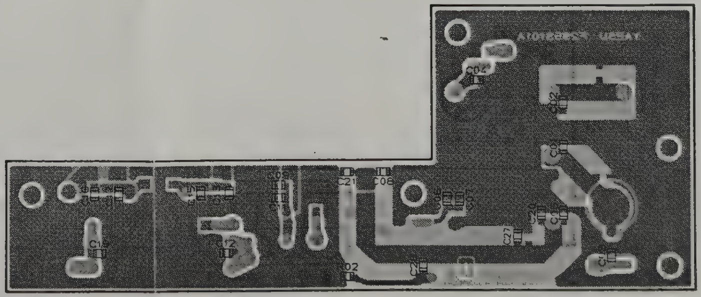
Component side (obverse)



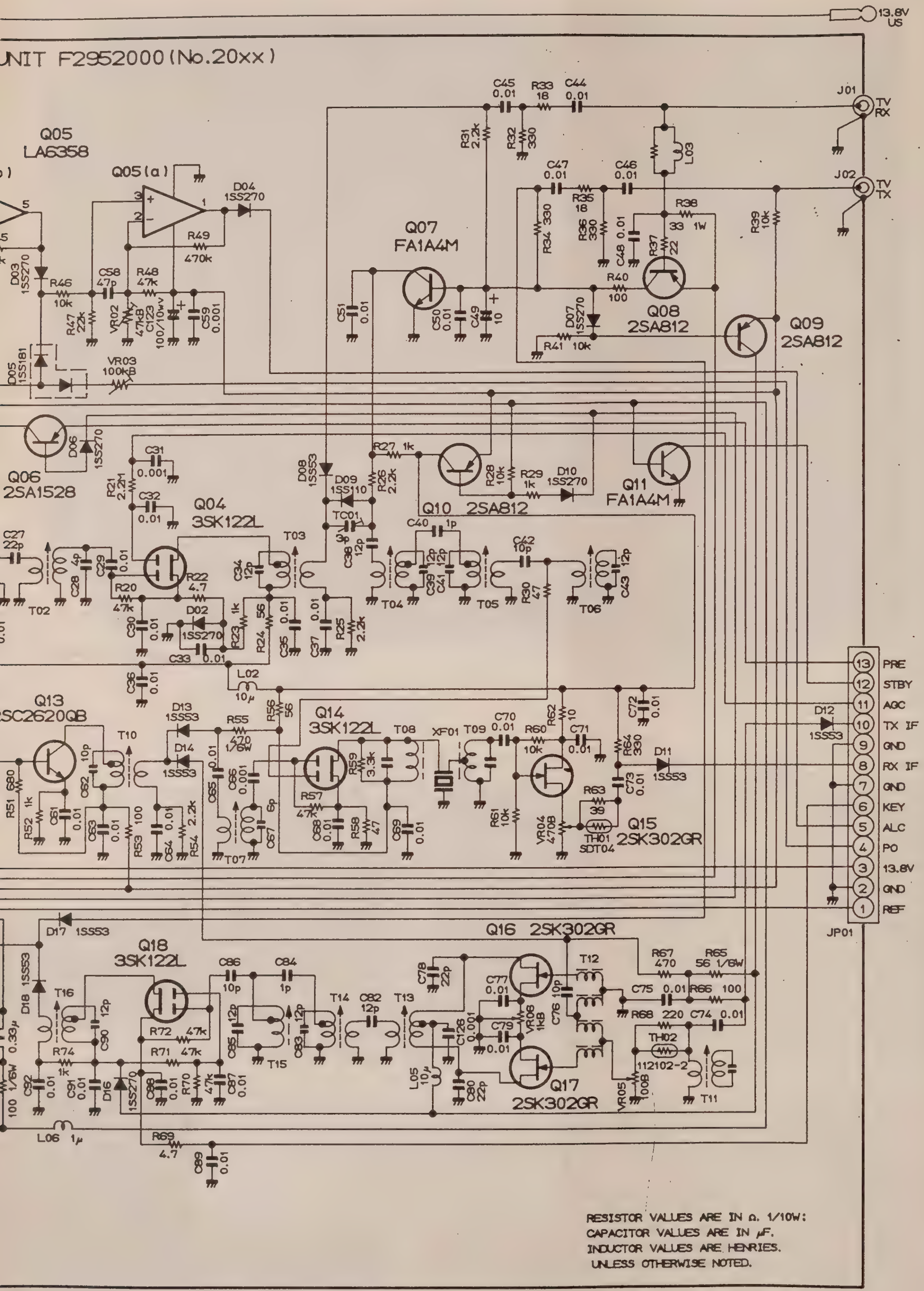
Chip side (obverse)



Component side (reverse)

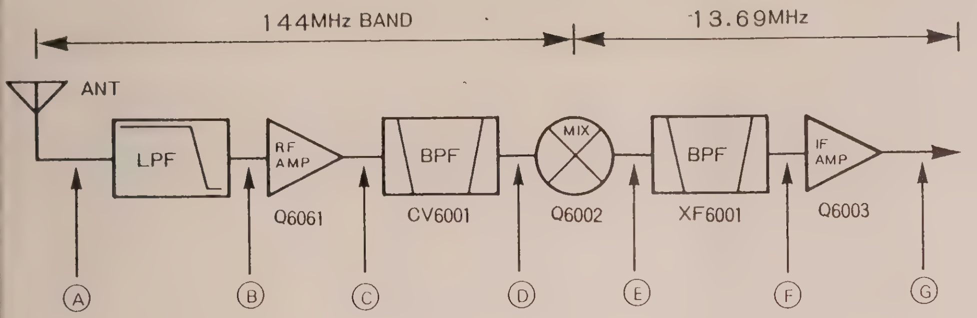


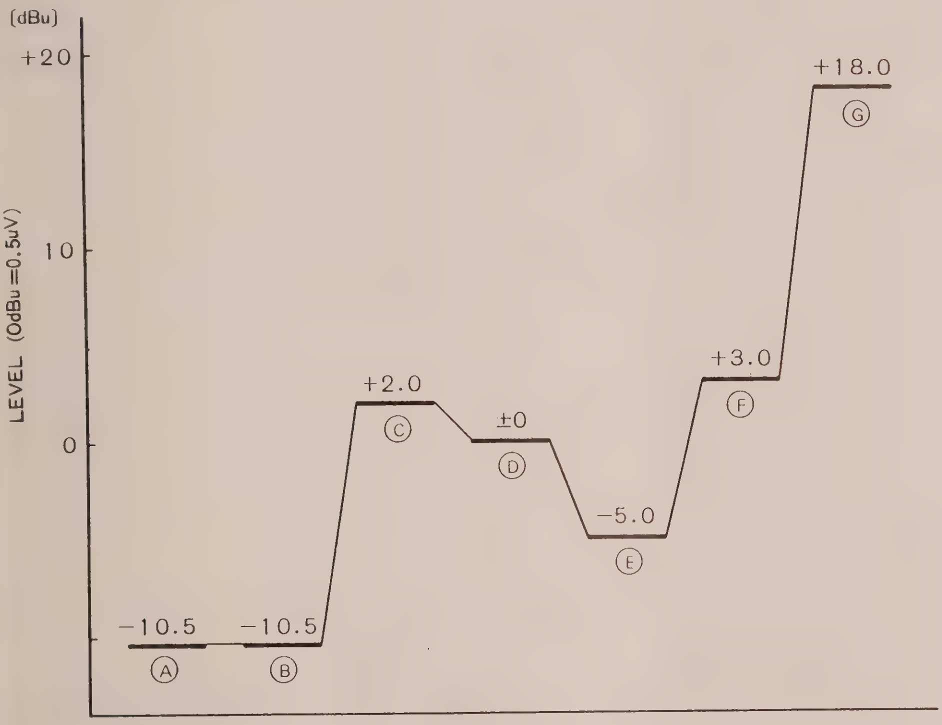
Chip side (reverse)

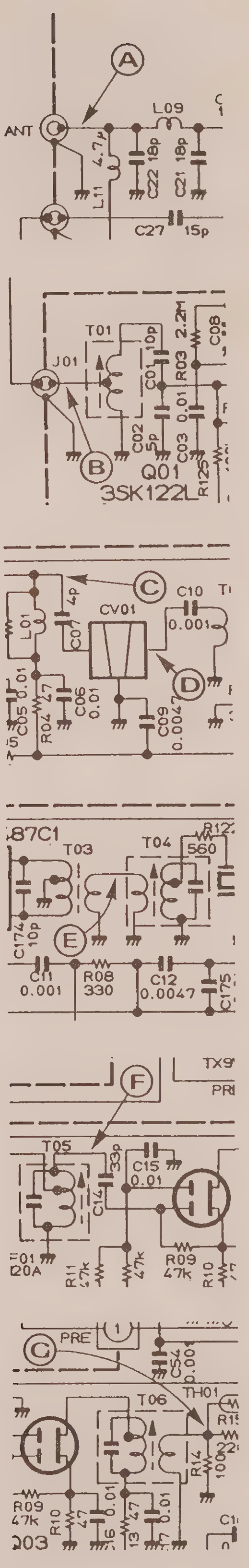


RESISTOR VALUES ARE IN Ω. 1/10W:
CAPACITOR VALUES ARE IN μF.
INDUCTOR VALUES ARE HENRIES.
UNLESS OTHERWISE NOTED.

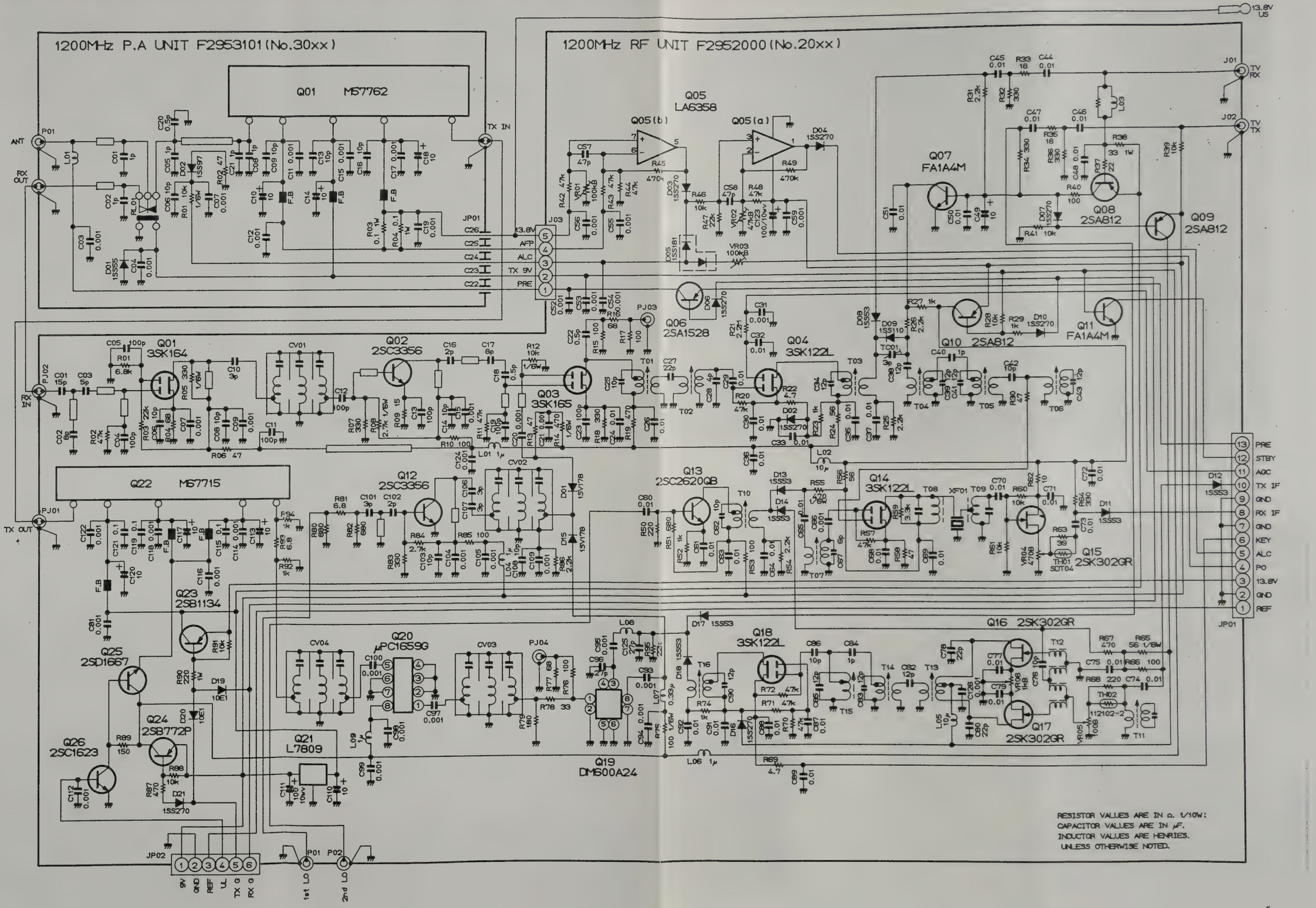
(144MHz RX) LEVEL DIAGRAM





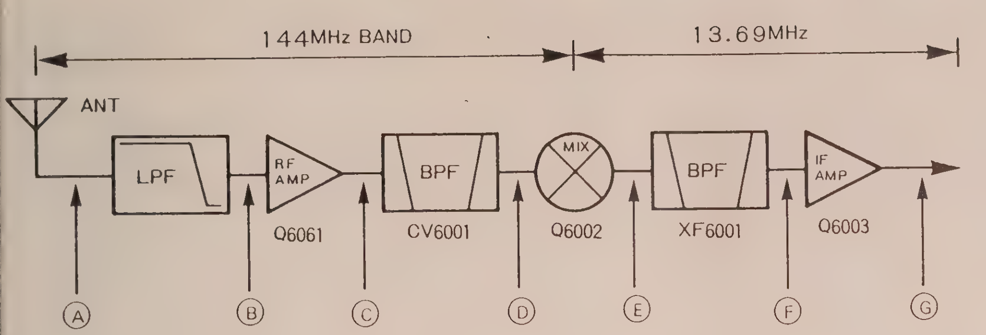


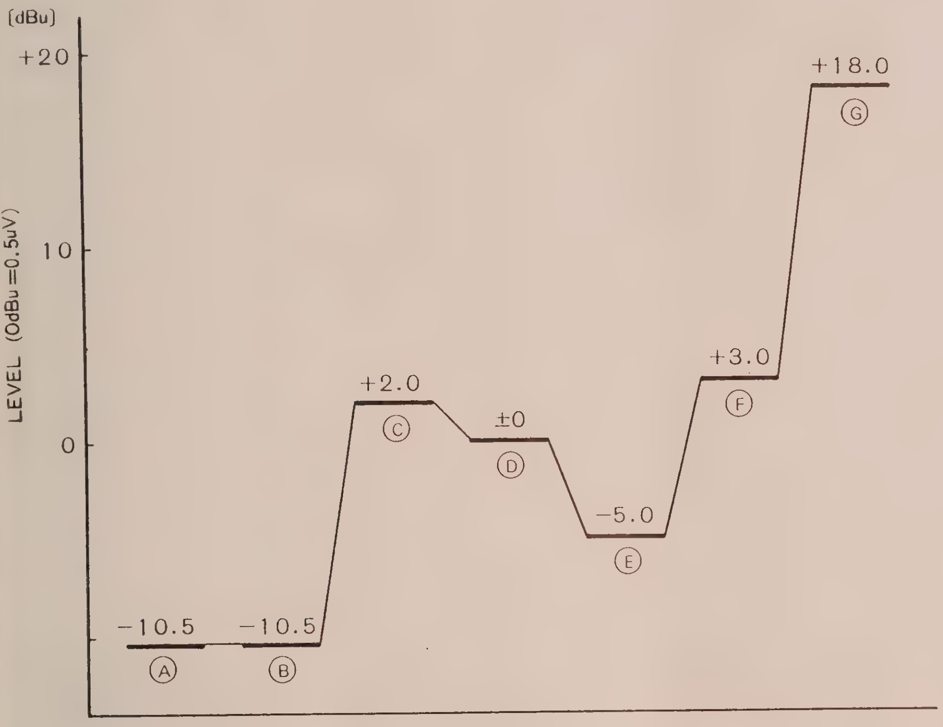
1200MHz BAND MODULE (FEX-736-1.2) OPTION

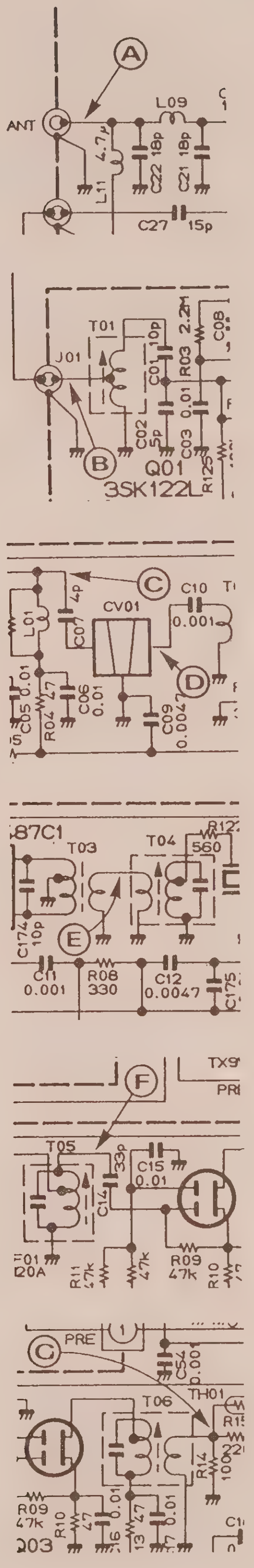


RESISTOR VALUES ARE IN Ω, 1/10W:
CAPACITOR VALUES ARE IN μF.
INDUCTOR VALUES ARE HENRIES.
UNLESS OTHERWISE NOTED.

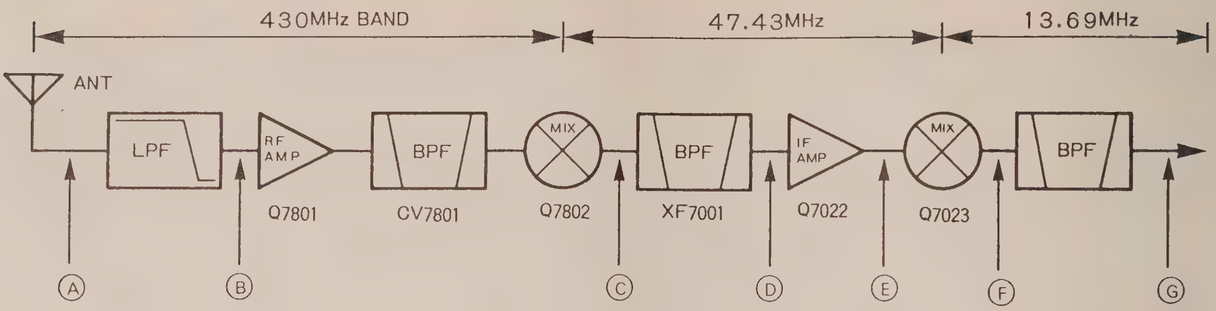
(144MHz RX) LEVEL DIAGRAM

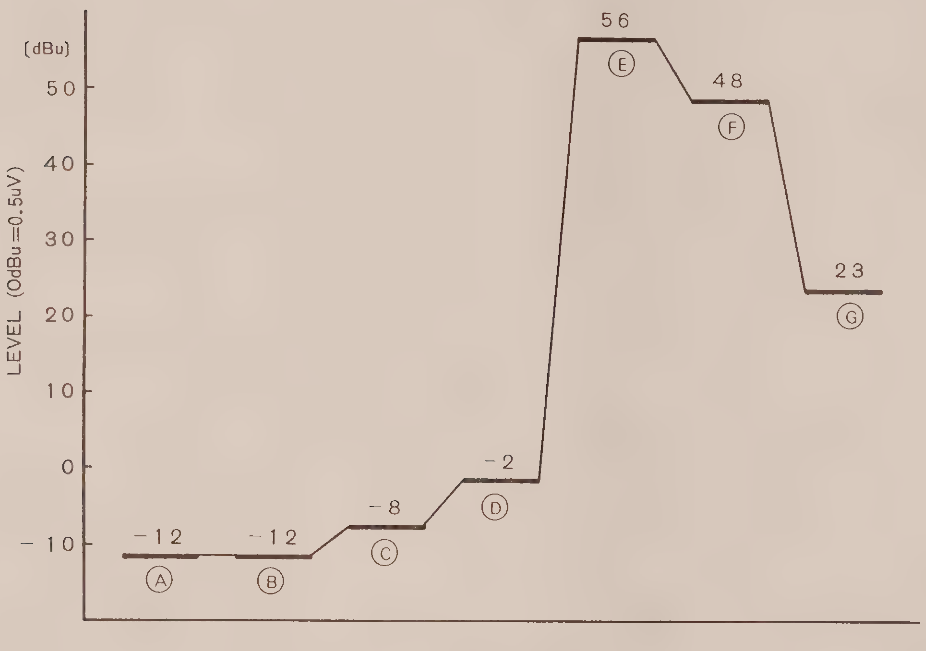


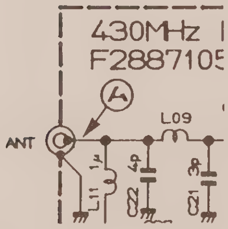


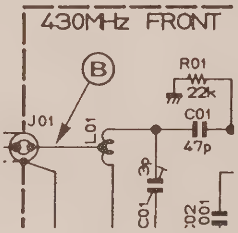


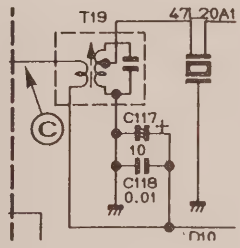
LEVEL DIAGRAM (430MHz RX)

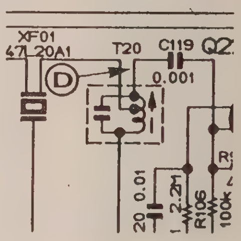


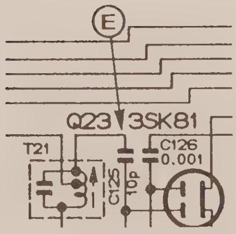


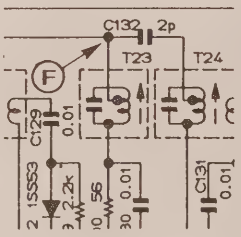


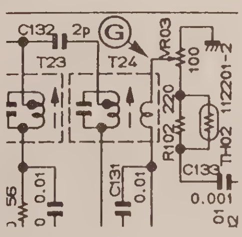




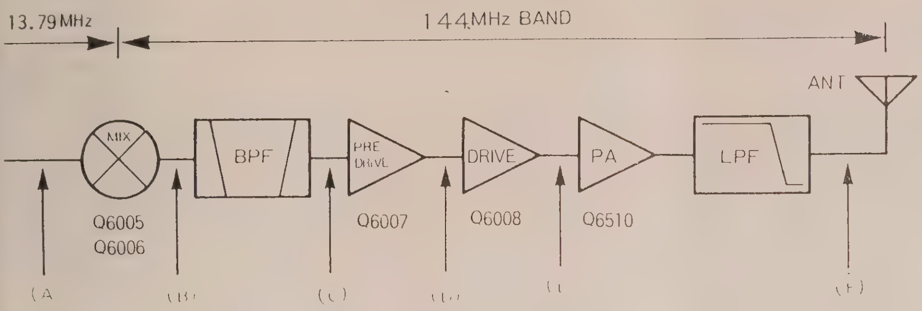


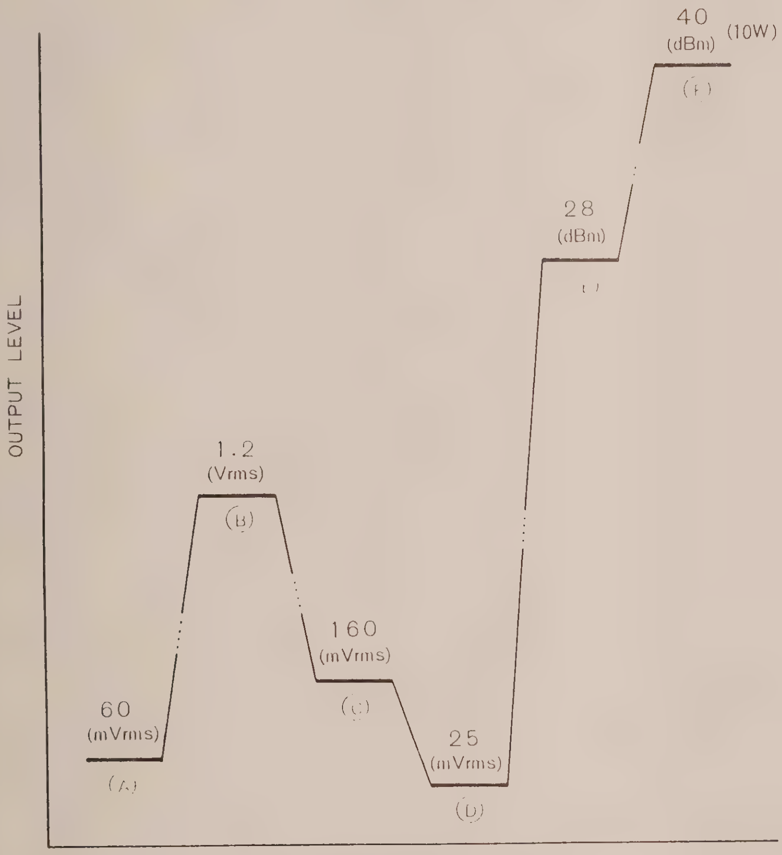


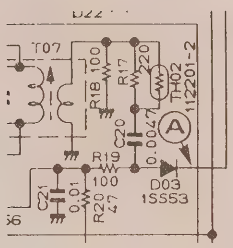


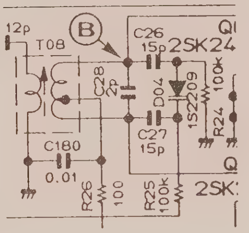


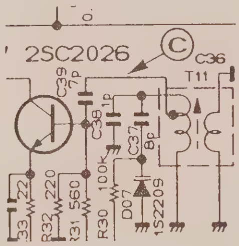
(144MHz TX) LEVEL DIAGRAM

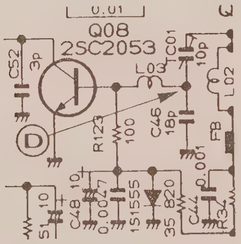


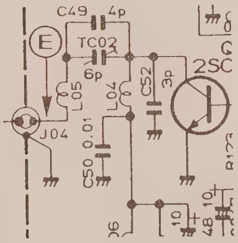


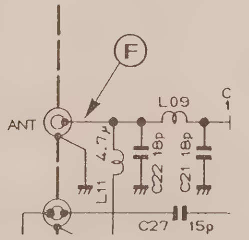




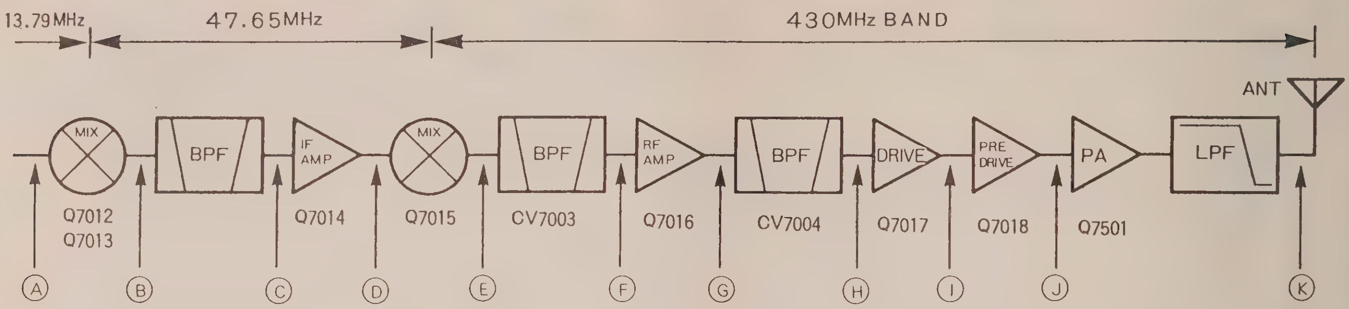


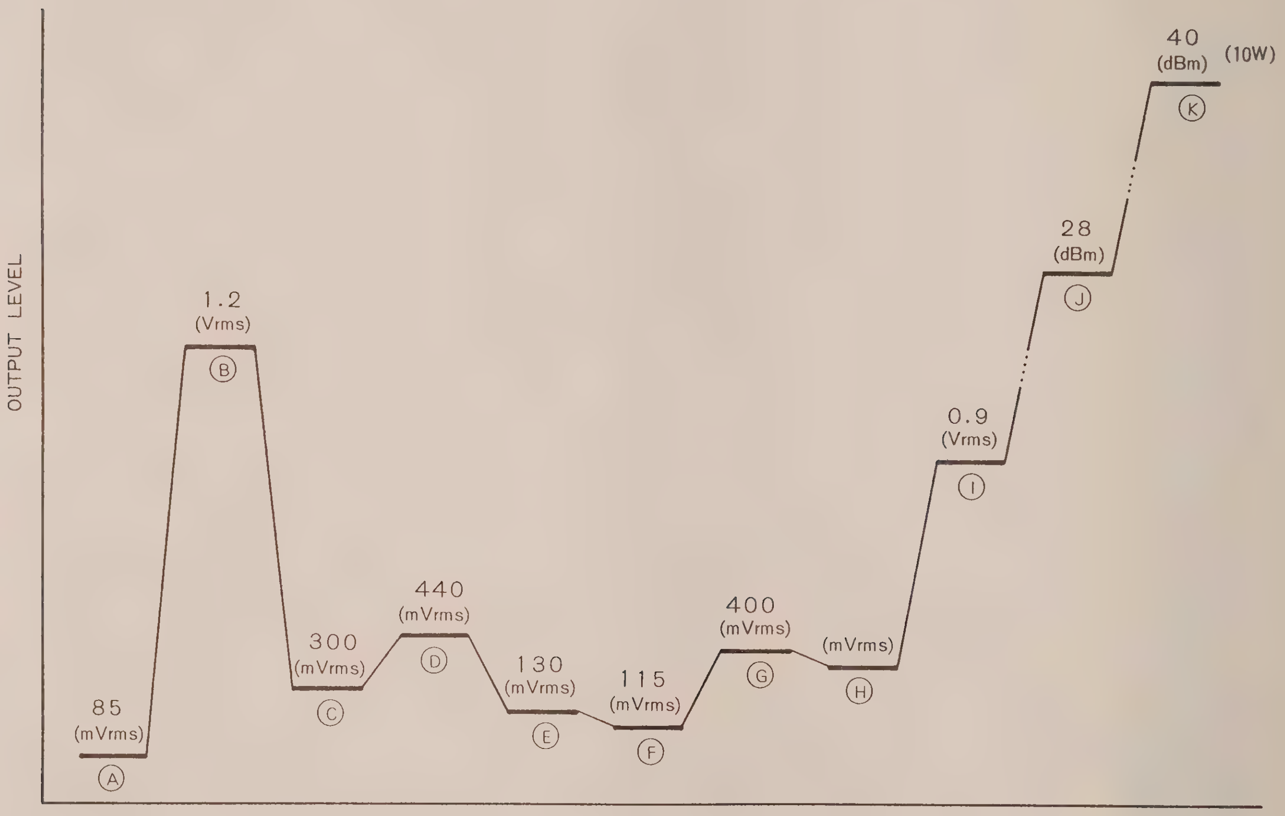


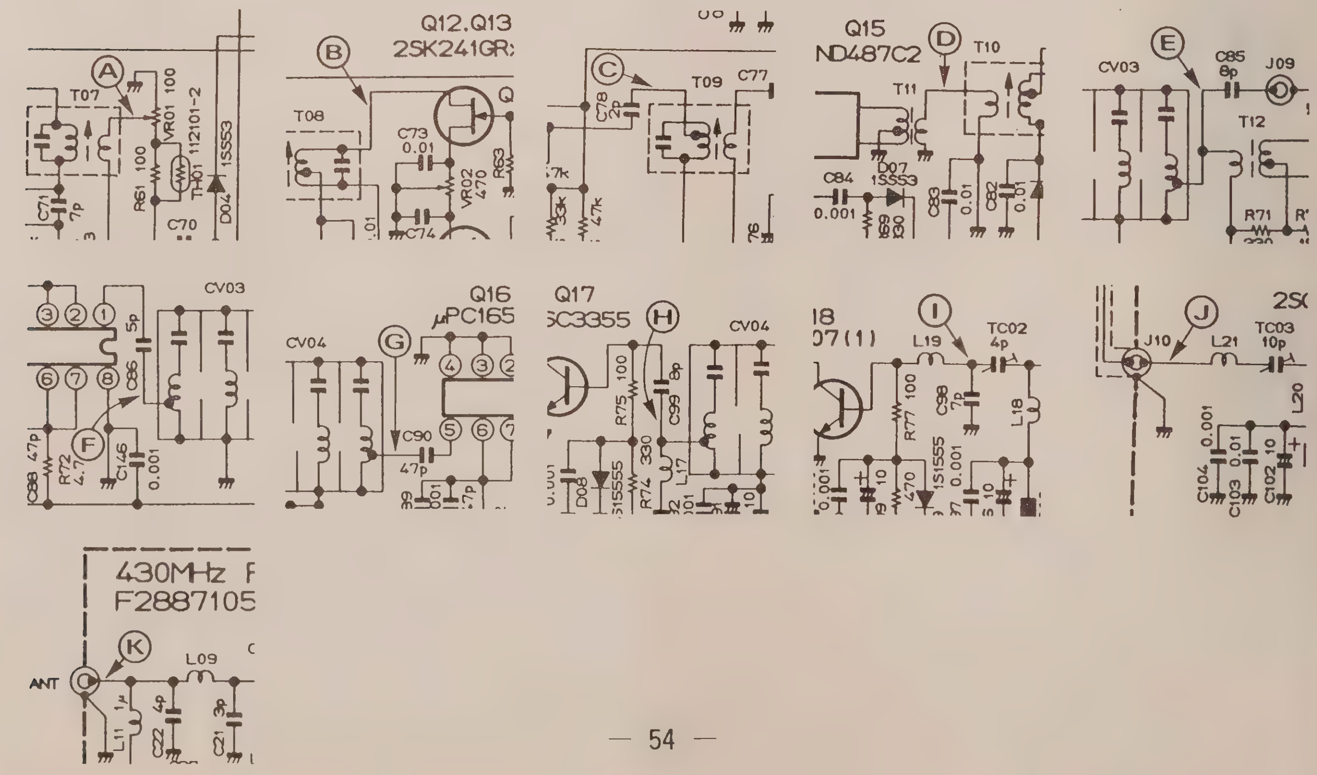




LEVEL DIAGRAM (430MHz TX)







ALIGNMENT

The FT-736R is carefully designed to allow the knowledgeable operator to make all adjustments required for various station conditions, modes and operator preferences simply from the controls on the front panel, without opening the case of the transceiver. These adjustments are described in the FT-736R Operating Manual.

The following procedures cover the sometimes critical and tedious adjustments that are not normally required once the transceiver has left the factory. However, if damage occurs and some parts subsequently be replaced, realignment may be required. If a sudden problem occurs during normal operation, it is likely due to component failure; realignment should not be done until after the faulty component has been replaced.

We recommend servicing be performed only by authorized Yaesu service technicians who are experienced with the circuitry and fully equipped for repair and alignment. Therefore, if a fault is suspected, contact the dealer from whom the transceiver was purchased for instructions regarding repair. Authorized Yaesu service technicians realign all circuits and make complete performance checks to ensure compliance with factory specifications after replacing any faulty components.

Those who do undertake any alignment are cautioned to proceed at their own risk. Problems caused by unauthorized attempts at realignment are not covered by the warranty policy. Also, Yaesu must reserve the right to change circuits and alignment procedures in the interest of improved performance, without notifying owners.

Under no circumstances should alignment be attempted unless the normal function and operation of the transceiver are clearly understood, the cause of the malfunction has been clearly pinpointed and any faulty components replaced, and the need for realignment determined to be absolutely necessary.

The following test equipment (and thorough familiarity with its correct use) is necessary for complete realignment. Correction of problems caused by misalignment resulting from use of improper test equipment is not covered under the warranty policy. While most steps do not require all equipment listed, interactions of some adjustments may require complex adjustments be performed afterwards. Do not attempt to perform only a single step unless it is clearly isolated electrically from all other steps. Rather, have all test equipment ready before beginning, and follow all of the steps in a section in the order they are presented.

A 50-ohm dummy load must be connected to the antenna jack in steps calling for transmission (pressing the MOX button). Correct alignment is not possible with an antenna.

The SHIFT control must be set to the 12 o'clock position, the NOTCH control set fully counterclockwise to OFF, the RF gain control fully clockwise (maximum), and the SQL control must be fully counterclockwise, unless stated otherwise.

After completing one step, read the following step to determine whether the same test equipment will be required. If not, remove the test equipment (except dummy load and wattmeter, if connected) before proceeding.

CAUTION!!!

The front panel PREAMP button must be set to OFF, and jumper plugs J5016-J5019 must be removed from the AF Unit to prevent DC voltage at the Antenna Jacks (which could damage the test equipment).

ALIGNMENT

Alignment Precautions

Correct alignment requires that the ambient temperature be the same as that of the transceiver and test equipment, and that this temperature be held constant between 20 and 30 °C (68 to 86 °F). When the transceiver is brought into the shop from hot or cold air it should be allowed some time for thermal equalization before alignment.

Alignments must only be made with oscillator shields and circuit boards firmly affixed in place. Also, the test equipment must be thoroughly warmed up before beginning.

Alignment values assume an internal DC bus voltage of 13.5V DC.

Note: Signal levels in dB referred to in the alignment procedure are based on 0dBu=0.5uV.

Test Equipment:

Spectrum analyzer covering up to 1300 MHz, or to top edge of highest frequency band installed

Tracking generator covering up to 1300 MHz, or to top edge of highest frequency band installed

RF signal generator covering up to 1300 MHz, or to top edge of highest frequency band installed, with calibrated output and modulation

RF voltmeter ranging from 5mV to 3Vrms, with 5% accuracy to 1300 MHz, or to top edge of highest frequency band installed

Frequency counter with 0.1 ppm accuracy to 1300 MHz, or to top edge of highest frequency band installed

DC voltmeter with at least 10 Megohms impedance

In-line wattmeter accurate to 1300 MHz, or to top edge of highest frequency band installed

50-ohm dummy load, non-reactive to 1300 MHz, or to top edge of highest frequency band installed, 30-watt capacity

FM Deviation meter and SINAD meter

Sampling coupler "T"

AF signal generator with adjustable output from 0.5 to 100mV

AF millivoltmeter

Oscilloscope with 100 MHz bandwidth

(PLL) ALIGMENT

I. PLL

A. 144 MHz PLL Sub Loop (on 144 MHz Main Unit - requires DC voltmeter)

1. Connect the DC voltmeter between TP6004 and chassis ground.
2. Tune the transceiver to 14x.01999 MHz, CW mode, and adjust L6019 for 4.2V on the voltmeter.
3. Retune the transceiver to 14x.02000 MHz and confirm at least 0.6V on the voltmeter.
4. Disconnect the voltmeter.

B. 144 MHz PLL VCXO (on 144 MHz Main Unit - requires oscilloscope and DC voltmeter)

1. Connect the oscilloscope to TP6002 and the voltmeter between TP6003 and chassis ground.
2. Tune the transceiver to 14x.01999 MHz, CW mode, and adjust L6023 for 5.0V on the voltmeter.
3. Retune the transceiver to 14x.02000 MHz and confirm at least 1.0V on the voltmeter.
4. Adjust T6013-T6016 for maximum amplitude on the 'scope.
5. Disconnect the 'scope and voltmeter.

C. 144 MHz PLL Main Loop (on 144 MHz Main Unit - requires DC voltmeter)

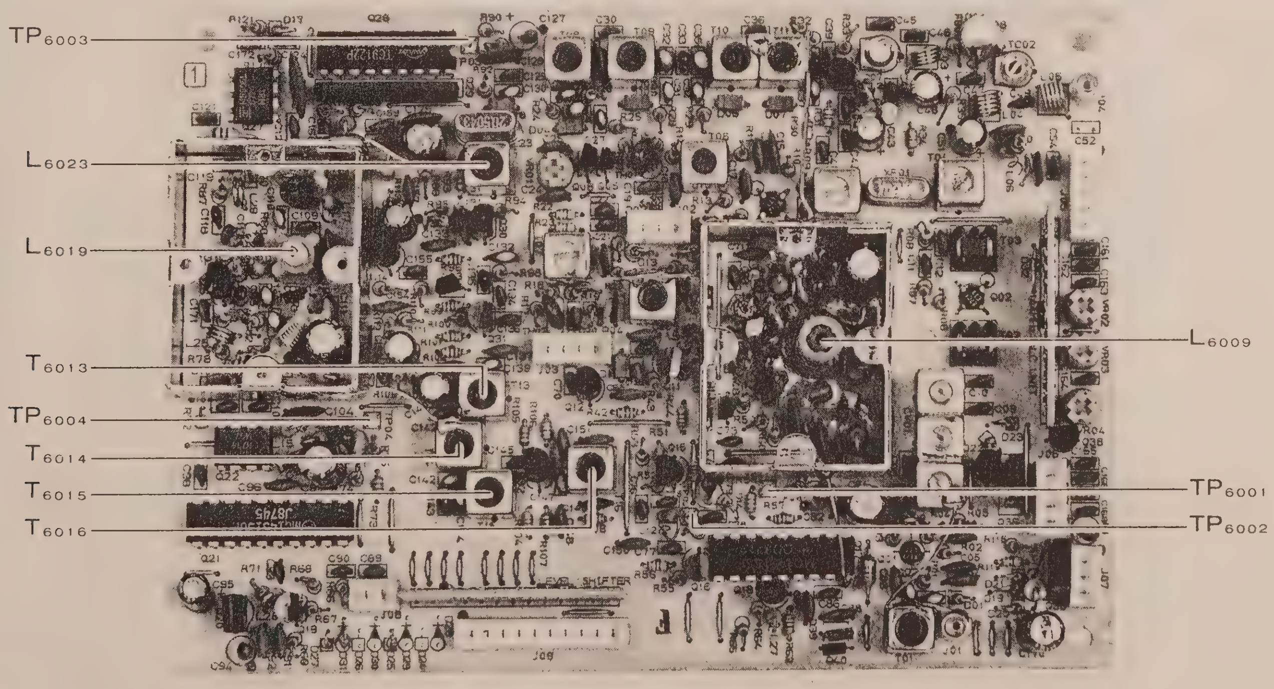
1. Connect the DC voltmeter between TP6001 and chassis ground.
2. Tune the transceiver to the low band edge, CW mode, and adjust L6009 for 2.0V on the voltmeter.
3. Retune the transceiver to the high band edge and confirm 3.0 ±0.5V (or 2.0 ±0.5V in versions B1, C1 and H1) on the voltmeter.
4. Disconnect the voltmeter.

D. Transmitter PLL (on TX Unit, requires DC voltmeter)

1. Connect the voltmeter between the exposed lead of R4001 and chassis ground.
2. Adjust T4001 for 4.0V on the voltmeter.
3. Remove the voltmeter.

E. Receiver PLL (on RX Unit, requires DC voltmeter)

1. Connect the voltmeter between the exposed lead of R3005 and chassis ground.
2. Adjust T3001 for 4.0V on the voltmeter.
3. Remove the voltmeter.



144MHz MAIN UNIT ALIGNMENT POINTS

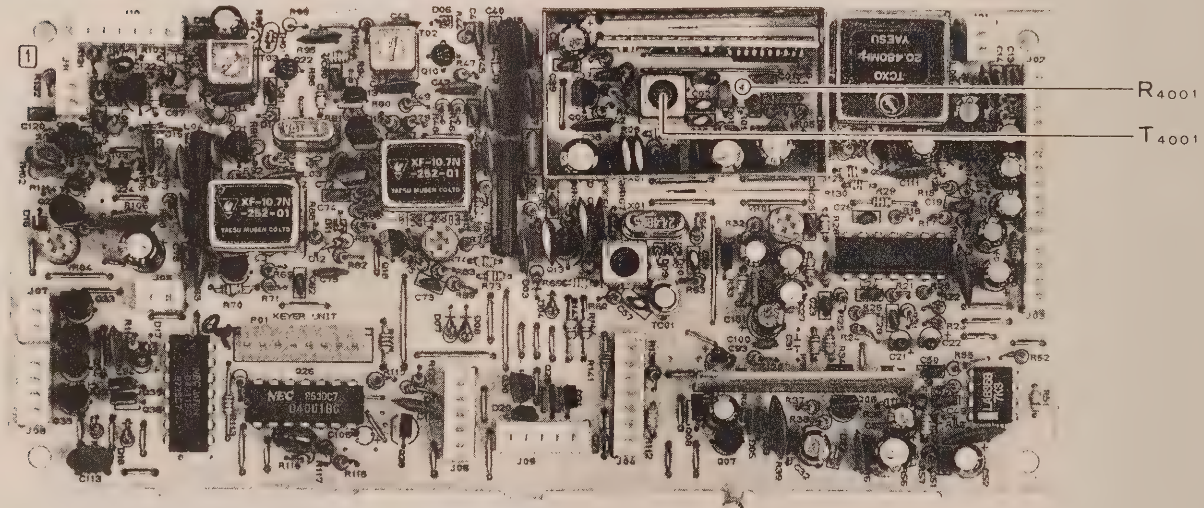
ALIGNMENT (PLL)

F. 430 MHz PLL Sub Loop (on 430 MHz PLL Unit - requires DC voltmeter)

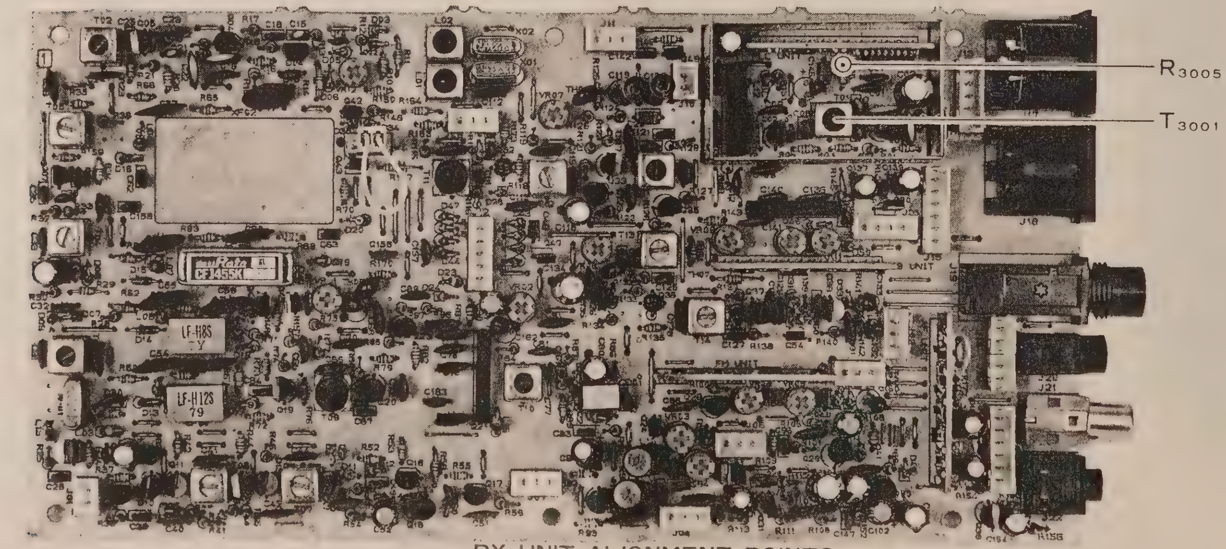
1. Connect the DC voltmeter between TP8001 and chassis ground.
2. Tune the transceiver to 4xx.01999 MHz, CW mode, and adjust L8004 for 4.2V on the voltmeter.
3. Retune the transceiver to 4xx.02000 MHz and confirm at least 0.6V on the voltmeter.
4. Disconnect the voltmeter.

G. 430 MHz PLL VCXO (on 430 MHz PLL Unit - requires RF voltmeter and DC voltmeter)

1. Connect the RF voltmeter to the exposed lead of R8015, and the DC voltmeter between the exposed lead of R8017 and chassis ground.
2. Tune the transceiver to 4xx.0199 MHz, CW mode.
3. Adjust T8001 for maximum RF vo tage, and then adjust L8016 f 6.5V on the DC voltmeter.
4. Retune the transceiver to 4xx.020 MHz and confirm at least 1.0V the DC voltmeter.
5. Retune the transceiver to t center of the band, FM mode, a move the RF voltmeter to J8001.
6. Adjust T8002 and CV8001 for max mum on the RF voltmeter.
7. Disconnect the voltmeters.



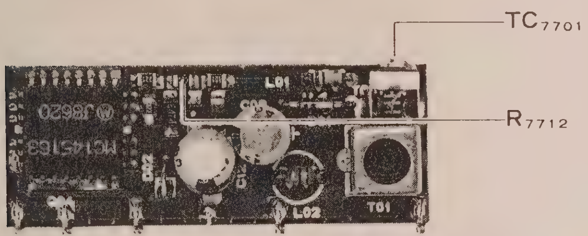
TX UNIT ALIGNMENT POINTS



RX UNIT ALIGNMENT POINTS

H. 430 MHz 2nd Local (on 430 MHz Local and RF Units - requires RF and DC voltmeters)

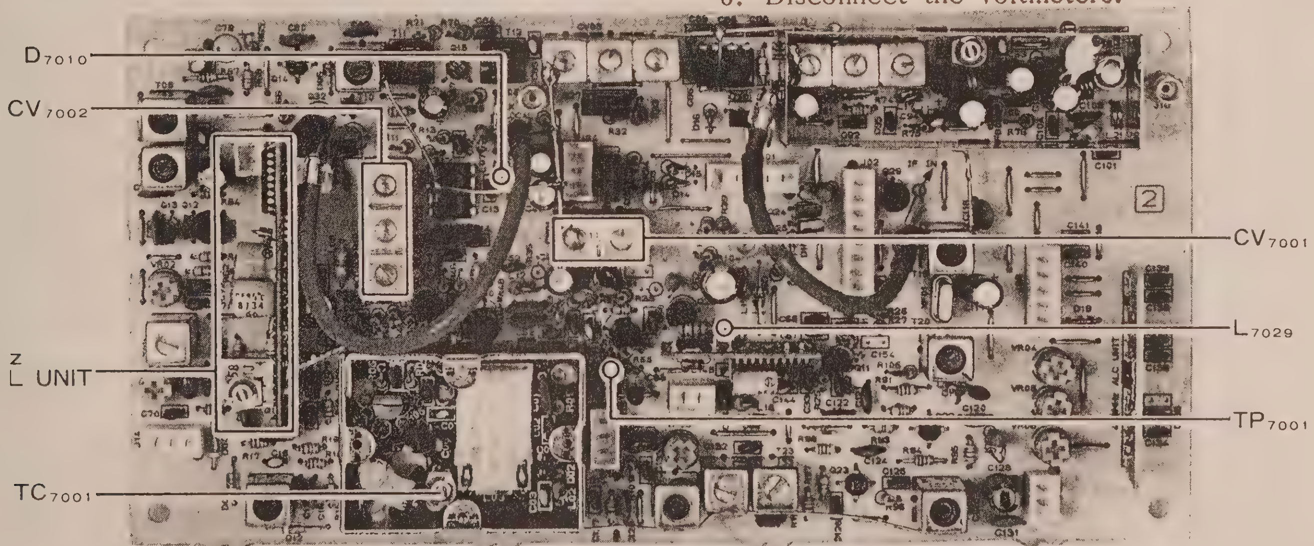
1. Connect the DC voltmeter between the exposed lead of R7712 on the 430 MHz Local Unit and chassis ground. Connect the RF voltmeter to the exposed lead of L7029 on the 430 MHz RF Unit.
2. Set the transceiver to the center of the 70cm band, FM mode.
3. Adjust TC7701 on the 430 MHz Local Unit for 5.0V on the DC voltmeter.
4. Adjust CV7001 on the 430 MHz RF Unit for maximum on the RF voltmeter.
5. Disconnect the voltmeters.



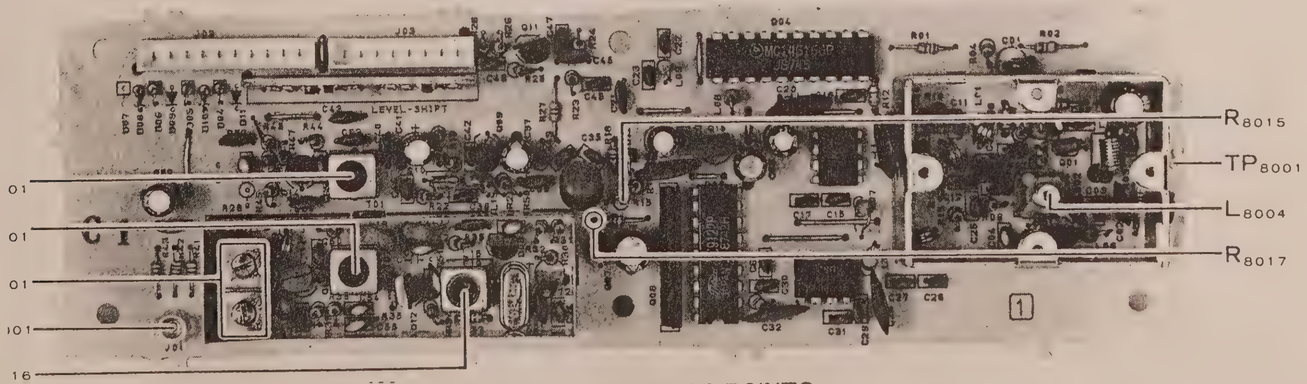
430MHz LOCAL UNIT ALIGNMENT POINTS

I. 430 MHz PLL Main Loop (on 430 MHz RF Unit - requires RF and DC voltmeters)

1. Connect the DC voltmeter between TP7001 and chassis ground. Connect the RF voltmeter to the cathode of D7010.
2. Tune the transceiver to the high edge of the 70cm band, CW mode, and adjust TC7001 for 4.0V (7.5V for versions A1 and A2) on the DC voltmeter.
3. Retune the transceiver to the low band edge and confirm at least 1.0V on the DC voltmeter.
4. Retune the transceiver to the center of the band and adjust CV7002 for peak on the RF voltmeter.
5. Retune the transceiver to the high and low band edges and confirm that the RF voltmeter reads within ±1dB (±2dB for versions A1 and A2) relative to the level at the center of the band.
6. Disconnect the voltmeters.



430MHz RF UNIT ALIGNMENT POINTS



430MHz PLL UNIT ALIGNMENT POINTS

ALIGNMENT (Transmitter)

II. Transmitter

A. ALC Meter Sensitivity (on TX Unit)

1. Set the METER selector to the DISC/ALC position, and select the CW mode.
2. Tune the transceiver to the center of the 144 MHz band and adjust VR4004 so that the ALC meter just begins to deflect while receiving.

B. 144 MHz Transmitter (on TX Unit and 144 MHz Main Unit - requires dummy load, wattmeter)

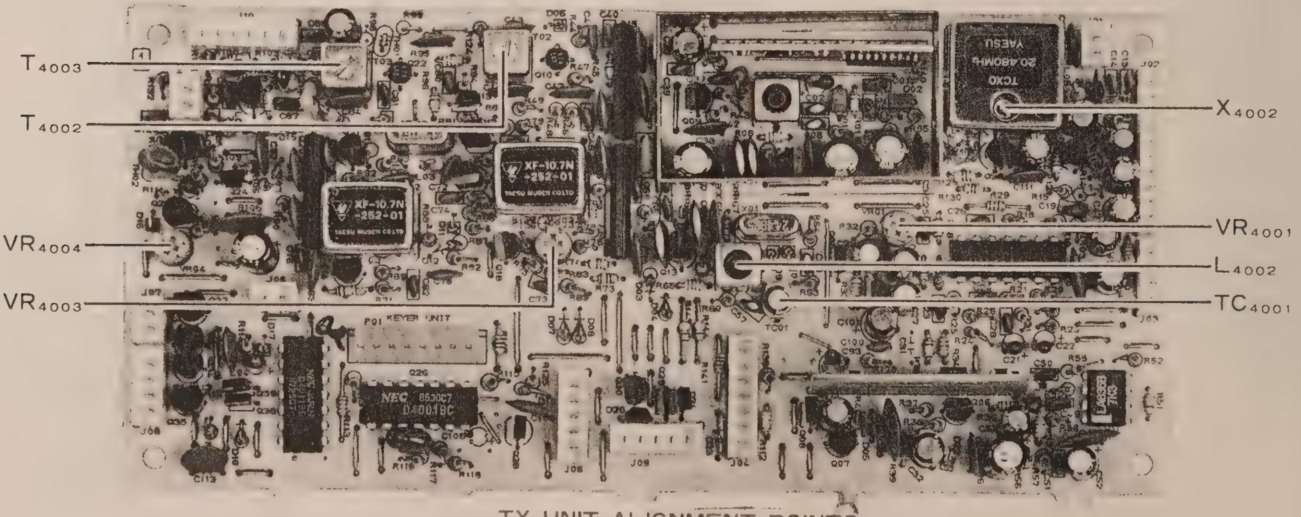
1. Set the METER selector to DISC/-ALC and select the FM mode.
2. Tune the transceiver to the center of the 2m band, and connect the dummy load and wattmeter to the 144 MHz antenna jack.
3. Press the MOX button and adjust the DRIVE control for 4W on the wattmeter.
4. Adjust T4002 and T4003 on the TX Unit, and T6008-T6012 on the 144 MHz Main Unit for peak on the wattmeter, reducing the DRIVE control setting if necessary to keep power output below 5W during adjustment.
5. Adjust the DRIVE control for an ALC indication equivalent to "7" on the S-Unit scale, and adjust TC6001 and TC6002 on the 144 MHz Main Unit for peak output.
6. Press the MOX button again to return to receive.

C. 144 MHz AFP (Automatic Final Protection, on 144 MHz Main Unit, requires dummy load, wattmeter and DC voltmeter)

1. Set the transceiver to the FM mode, turn the DRIVE control fully clockwise, and tune to the center of the 2m band.
2. With the dummy load and wattmeter connected to the 144 MHz antenna jack, connect the DC voltmeter to the anode of D6032.
3. Press the MOX button and adjust VR6003 for 1.0V on the voltmeter.
4. Press the MOX button to return to receive, and remove the voltmeter.

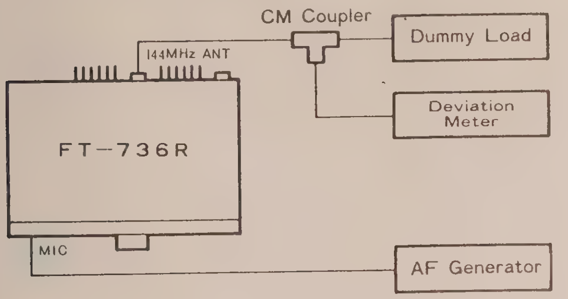
D. 144 MHz ALC level & PO Meter Sensitivity (on 144 MHz Main Unit-requires dummy load and wattmeter)

1. Set the transceiver to the center of the 2m band, FM mode, and set the METER selector to the S/PO position.
2. With the dummy load and wattmeter connected to the 144 MHz antenna jack, set the DRIVE control fully clockwise.
3. Press the MOX button and alternately adjust VR6002 for 25W on the wattmeter and VR6004 for an indication of "8" on the PO meter scale, repeating both adjustments several times.
4. Press the MOX button to return to receive.



TX UNIT ALIGNMENT POINTS

E. 144 MHz FM Deviation (on TX Unit)

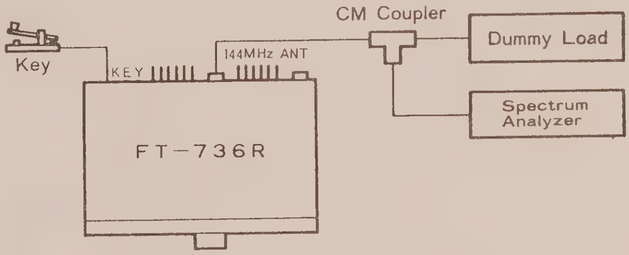


1. Connect the test equipment as shown in the diagram above.
2. In FM mode, tune the transceiver to the center of the 144 MHz band, and set the MIC Gain to 12 o'clock and DRIVE fully clockwise.
3. Set the AF generator for 15mV output at 1 kHz.
4. Press the MOX button and adjust VR4001 for ±4.5 kHz deviation on the deviation meter.
5. Now select the FM-N mode and confirm ±2 to ±3 kHz deviation.
6. Press the MOX button again to return to receive.

F. SSB Carrier Point (on TX Unit-requires dummy load, wattmeter and AF generator)

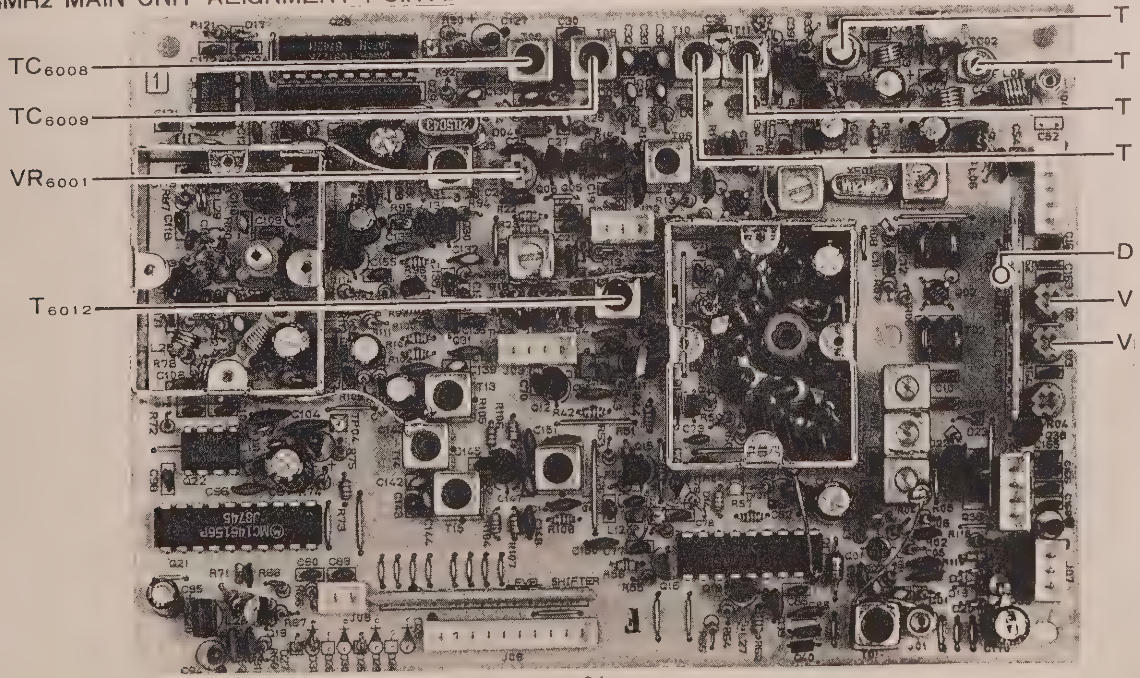
1. Connect the dummy load and wattmeter to the 144 MHz antenna jack, and the AF generator to pin 8 of the MIC jack (pin 7 is ground).
2. Tune the transceiver to the center of the 2m band in USB mode. Set the MIC gain control to 12 o'clock and the DRIVE control to 9 o'clock. Press the MOX button.
3. While maintaining a constant AF injection level of 1mV, tune the AF generator back and forth between 300 and 2700 Hz while adjusting L4002 so that the power output is the same at both AF injection frequencies.
4. Change to LSB mode and repeat step 3, adjusting L4001.
5. Press the MOX button to return to receive, remove the AF generator.

G. SSB Carrier Balance (on TX Unit)



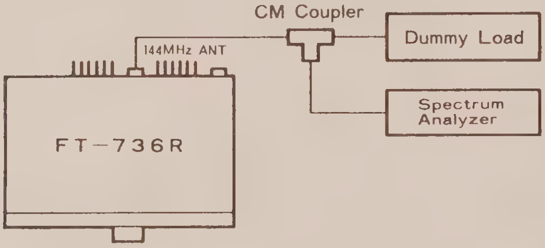
1. Connect the test equipment as shown in the diagram above.
2. In CW mode, tune the transceiver to the center of the 144 MHz band. Set the MIC Gain fully counterclockwise and DRIVE fully clockwise. Also, set the VOX gain control to 9 o'clock.

144MHz MAIN UNIT ALIGNMENT POINTS



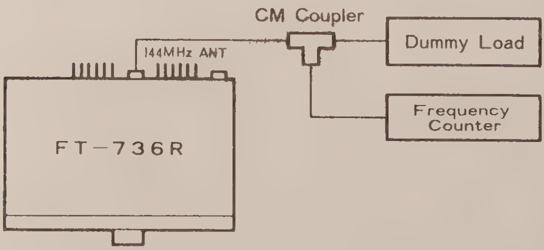
3. Close the key and note the carrier level on the analyzer. Then change to the USB mode.
4. Press the MOX button and adjust VR4003 for minimum carrier level (less than 40dB below the CW carrier level noted in step 3).
5. Change to LSB mode and confirm at least 40dB carrier suppression while transmitting.
6. Press the MOX button to return to receive.

H. 144 MHz TX Mixer (on 144 MHz Main Unit)



1. Connect the test equipment as shown in the diagram above.
2. In FM mode, tune the transceiver to the center of the 144 MHz band. Set the MIC Gain fully counterclockwise and DRIVE fully clockwise.
3. Press the MOX button and adjust VR6001 so that the spurii at 13.79 MHz on either side of the carrier are at least 65dB down.
4. Press the MOX button again to return to receive.

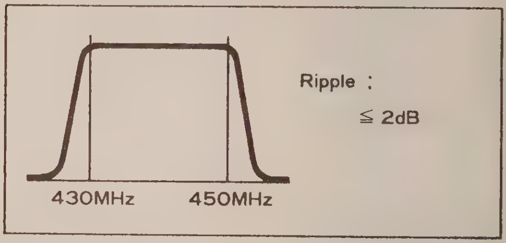
I. TX Frequency Calibration (on TX Unit)



1. Connect the test equipment as shown in the diagram above.
2. In FM mode, tune the transceiver to 145.00000 MHz. Set the MIC gain fully counterclockwise and DRIVE fully clockwise.
3. Press the MOX button and adjust the trimmer inside the TCXO (X4002) housing for 145.00000 MHz on the counter.
4. Press the MOX button to return to receive.

J. 430 MHz TX RF (on 430 MHz RF Unit - requires tracking generator and spectrum analyzer)

1. Connect the tracking generator to J7009 on the 430 MHz Main Unit, and couple the spectrum analyzer to the 430 MHz antenna jack.
2. Set the tracking generator output to -30dBm and adjust CV7003, CV7004, TC7002 and TC7003 for the passband shown (reducing injection level, if necessary, to avoid saturation).



K. 430 MHz TX IF, Part I (on 430 MHz RF Unit - requires dummy load and wattmeter)

1. With the dummy load and wattmeter connected to the 430 MHz antenna jack, tune the transceiver to the center of the 70cm band, FM mode.
2. Press the MOX button and set the DRIVE control for 4W output.
3. Adjust T7006-T7010 for maximum deflection on the wattmeter (but do not exceed 5W output: reduce the DRIVE control setting, if necessary).
4. Press the MOX button again to return to receive.

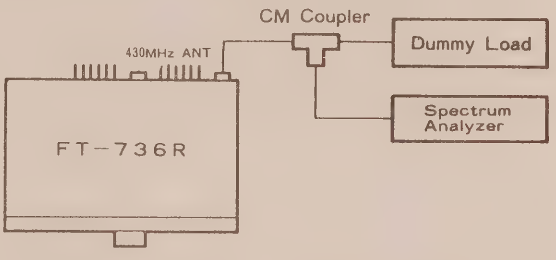
L. 430 MHz AFP (Automatic Final Protection, on 430 MHz RF Unit -requires dummy load and DC voltmeter)

1. With the dummy load connected to the 430 MHz antenna jack, connect the DC voltmeter to the jumper wire (marked "A" in the drawing below) on the 430 MHz RF Unit.
2. Set the transceiver to FM, band center. Set the DRIVE control fully clockwise, and set the METER selector to S/PO. Press the MOX button.
3. Adjust VR7005 for 1.0V on the DC voltmeter.
4. Press the MOX button again to return to receive, and remove the voltmeter.

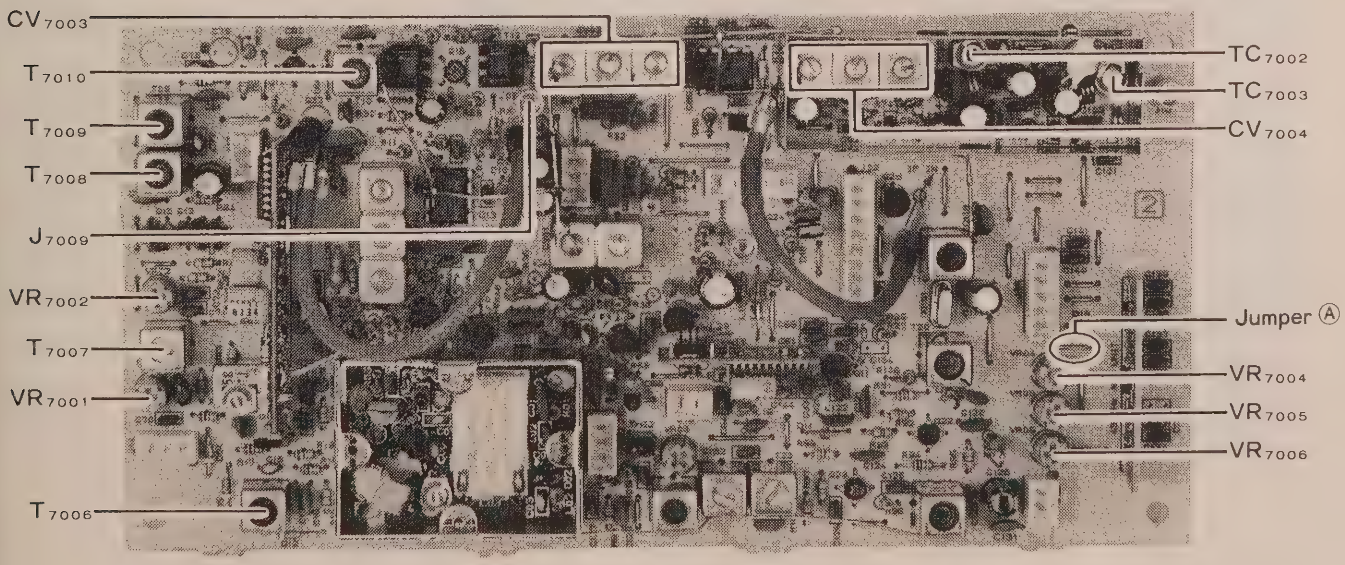
M. 430 MHz ALC and PO Meter Sensitivity (on 430 MHz RF Unit -requires dummy load and wattmeter)

1. With the dummy load connected to the 430 MHz antenna jack, set the transceiver to FM, band center. Set the DRIVE control fully clockwise, and set the METER selector to S/PO.
2. Press the MOX button and alternately adjust VR7004 for 25W output and VR7006 so the transceiver meter deflects to "8" on the PO scale.
3. Repeat the adjustments in step 2 several times, and then press the MOX button again to return to receive.

N. 430 MHz TX Mixer (on 430 RF Unit)

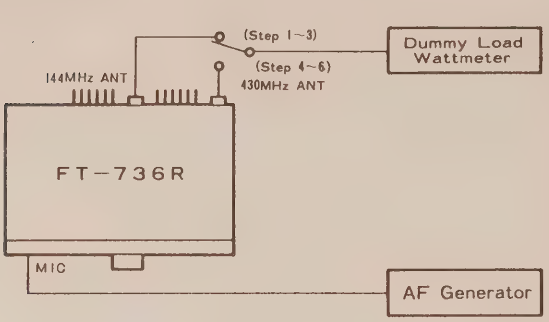


1. Connect the test equipment as shown in the diagram above.
2. Tune the transceiver to the center of the 70cm band, FM mode. Set the MIC gain fully counterclockwise and DRIVE fully clockwise.
3. Press the MOX button and adjust VR7002 so that the spurii at 13.79 MHz on either side of the carrier are at least 65dB down.
4. Press the MOX button again to return to receive.



430MHz RF UNIT ALIGNMENT POINTS

O. 430 MHz TX IF, Part II (on 430 MHz RF Unit)

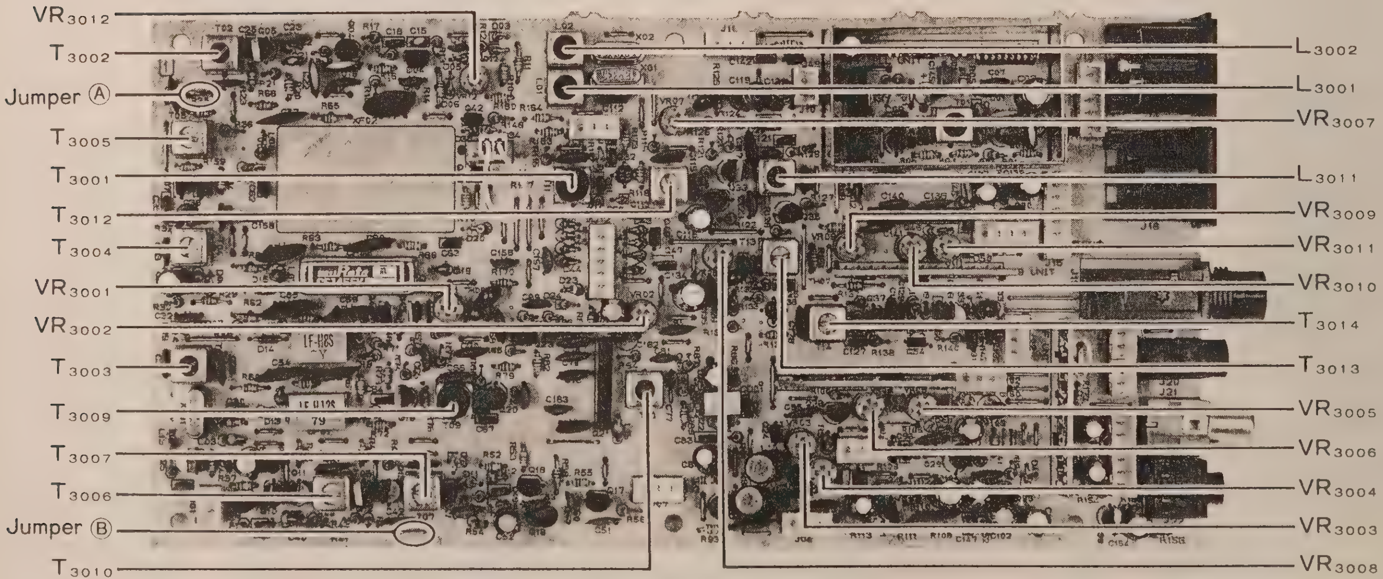


1. Connect the test equipment as shown above, with the AF generator set for 3mV @ 1 kHz.
2. Set the transceiver to USB, at the center of the 144 MHz band.
3. Set the DRIVE control fully clockwise, press the MOX button to transmit, and adjust the MIC gain for 5W output. Press the MOX button again to return to receive.
4. Retune the transceiver, now to the center of the 430 MHz band.
5. Press the MOX button and adjust VR7001 for 5W output.
6. Press the MOX button to return to receive, and disconnect the test equipment.

III. Receiver

A. IF Shift (on RX Unit - requires frequency counter)

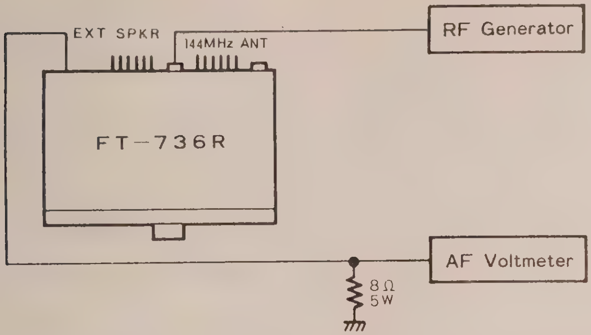
1. Connect the counter to jumper "A" in the diagram below.
2. Tune the transceiver to the center of the 430 MHz band, USB mode, and set the SHIFT control to 12 o'clock.
3. Adjust L3001 for 13.2335 MHz ±50 Hz on the counter.
4. Confirm at least ±1 kHz shift on the counter when the SHIFT control is set to its extremes.
5. Center the SHIFT control and select the LSB mode.
6. Adjust L3002 for 13.2365 MHz ±50 Hz on the counter.
7. Repeat step 4.
8. Center the SHIFT control and select the CW mode.
9. Adjust VR3012 for 13.2350 MHz ±50 Hz on the counter. In CW mode the counter frequency should not change when the SHIFT control is turned.
10. Disconnect the counter.



RX UNIT ALIGNMENT POINTS

B. 144 MHz RX (on RX Unit and 144 MHz Main Unit)

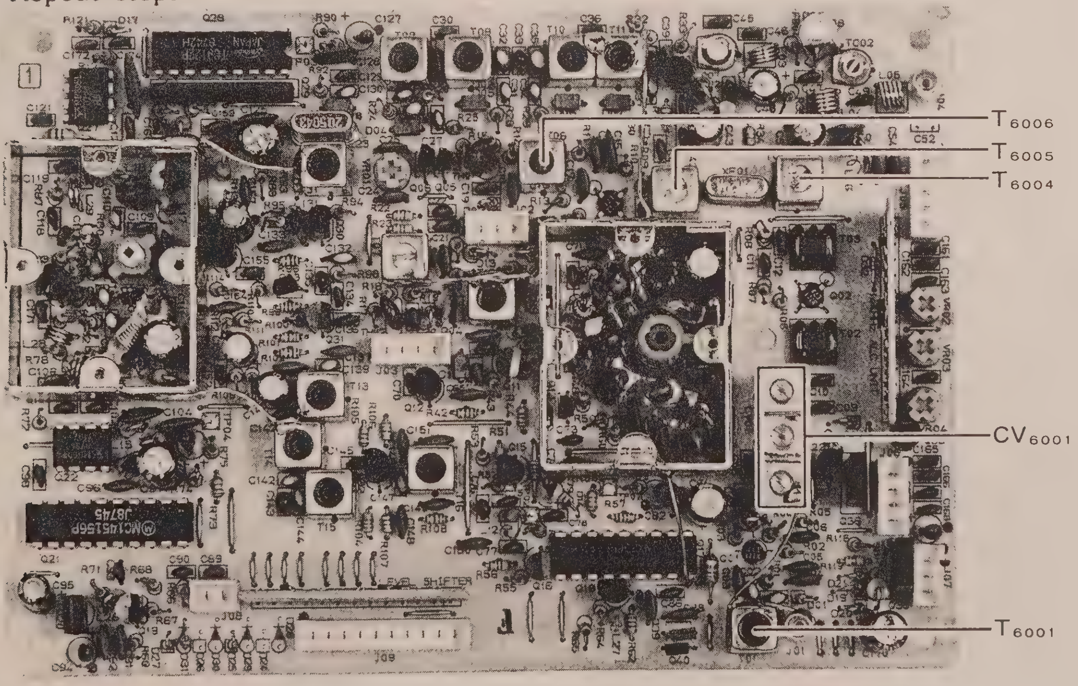
1. Connect the test equipment as shown here.



2. Set the transceiver to FM mode, the METER selector to S/PO, AF gain to 10 o'clock and RF gain fully clockwise.
3. Tune the transceiver and RF generator to the center of the 2m band. Inject a 1 kHz tone with ±7 kHz deviation at a level sufficient to produce an S-7 reading on the S-meter.
4. Adjust T6001, CV6001 and T6004-T6006 on the 144 MHz RX Unit, and T3002-T3005 and T3009 on the RX Unit for peak S-meter deflection.
5. Adjust T3010 on the RX Unit for maximum deflection on the AF voltmeter.
6. Repeat steps 4 and 5 several times.
7. Change to mode to USB and turn off the RF generator's injection modulation.
8. Tune the transceiver for a 1.5 kHz heterodyne on the injected carrier, and adjust the injection level for S-7 on the S-meter.
9. Adjust T3011-T3014 on the RX Unit for maximum deflection on the AF voltmeter, reducing the injection level if necessary to maintain an S-7 indication on the S-meter.
10. Remove the test equipment.

C. Noise Squelch (RX Unit - requires RF generator)

1. With the RF generator connected to the 144 MHz antenna jack and switched off, set the transceiver to FM, and set the SQL and RF gain controls fully clockwise.
2. Tune the transceiver to the center of the 2m band and turn the SQL control counterclockwise just until the squelch opens, which should be around 9 o'clock.
3. Set the SQL control to 9 o'clock and adjust VR3003, if necessary, to the point just before the squelch opens with no RF injection.



144MHz MAIN UNIT ALIGNMENT POINTS

4. Set the RF generator for ±3.5 kHz deviation of a 1 kHz tone at the same frequency as the transceiver, and confirm that the squelch opens with less than -12dBu injection when the SQL control is at 9 o'clock.
5. Turn off the RF generator, move the SQL control to 10 o'clock, select USB mode and adjust VR3009 so the squelch is just closed.
6. Adjust the frequency of the RF generator (with no modulation) for a 1.5 kHz heterodyne in the receiver, and reduce the injection level to confirm that the squelch opens with less than 0dBu injection.
7. Return to FM mode and turn the SQL control fully clockwise. Retune the RF generator to the transceiver frequency, and modulate with ±3.5 kHz of a 1 kHz tone.
8. Confirm that the squelch just opens with an injection level of 0dBu ±5dB.

D. Digital Squelch (on RX Unit - requires RF generator)

1. Connect the RF generator to the 144 MHz antenna jack and tune it and the transceiver to the center of the 2m band, FM mode.
2. Set the RF generator for -11 dBu injection of a 1 kHz tone with ±3.5 kHz deviation.
3. Adjust VR3004 so that the squelch just closes (BUSY indicator turns off) while pressing the RESET button.

E. 144 MHz S-Meter Sensitivity (on RX Unit - requires RF generator)

1. Connect the RF generator to the 144 MHz antenna jack. Tune the transceiver to the center of the 2m band. Select USB mode and set the METER selector to S/PO, SQL control fully counterclockwise and RF gain control fully clockwise.
2. With no RF injection, adjust VR3011 so that the S-meter just begins to deflect.
3. Inject a 20dBu carrier (with no modulation), and tune the generator to produce a 1.5 kHz heterodyne in the receiver.
4. With 20dBu carrier injection, adjust VR3010 for S-9 indication on the S-meter.
5. Reduce the injection level to 0dBu and adjust VR3008 for S-2 indication. Then repeat step 4 and this step several times.
6. Select the FM mode, and retune the RF generator to the same frequency as the transceiver (band center). Modulate the alignment signal with ±3.5 kHz deviation of a 1 kHz tone.
7. Inject 60dBu and adjust VR3002 for full scale S-meter deflection.
8. Reduce the injection level to 10dBu and adjust VR3001 for S-7 deflection.
9. Repeat steps 7 and 8 several times.

F. RX Carrier Point (on RX Unit- requires RF signal generator and frequency counter)

1. Connect the RF generator to the 144 MHz antenna jack, and the counter to jumper "B" in the diagram on the page 64.
2. With the transceiver tuned to the center of the 2m band, select the USB mode, set the METER selector to S/PO and the SHIFT control to 12 o'clock.
3. Tune the RF generator 300 Hz below the displayed transceiver frequency, and set the injection for S-9 indication on the S-meter (with no modulation).
4. Now tune the RF generator 2700 Hz below the transceiver frequency (without changing injection level) and adjust L3001 again for S-9.
5. Change to LSB mode and repeat steps 3 and 4, but this time 300 and 2700 Hz above the transceiver frequency, adjusting L3002.
6. Change to FM mode, turn off the RF generator and adjust VR3012 for 13.2350 MHz ±50 Hz on the counter.

7. Disconnect the counter.

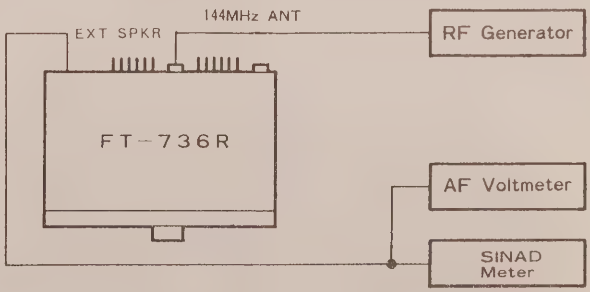
G. DISC Meter (on RX Unit - requires RF generator)
   1. With the RF generator connected to the 144 MHz antenna jack, tune the transceiver and RF generator to the center of the 2m band, select the FM mode, and set the METER selector to DISC/ALC.
   2. With 20dBu injection of a 1 kHz tone with ±3.5 kHz deviation, adjust VR3006 so that the meter deflects to the center ("5" on the PO scale).

H. Scanner Center Stop (on RX Unit- requires RF generator)
   1. With the RF generator connected to the 144 MHz antenna jack and set for 20dBu injection with no modulation, tune the transceiver and RF generator to the center of the 2m band, select the FM mode, and set the SQL and RF gain controls fully clockwise.
   2. Tune the RF generator frequency back and forth slightly while watching the BUSY indicator, noting the frequencies above and below the transceiver frequency at which the indicator turns off.
   3. Calculate the offsets of these frequencies from the frequency displayed on the transceiver. If these are not the same, adjust VR3005 and repeat step 2 until they are.

I. Notch Filter (on RX Unit, requires RF generator)
   1. With the RF generator connected to the 144 MHz antenna jack, set for 5dBu injection with no modulation.
   2. Tune the transceiver to the center of the 2m band, select the USB mode, and set the following controls:
      a. METER selector to S/PO
      b. SQL control fully clockwise
      c. RF gain fully clockwise
      d. AF gain to 10 o'clock
      e. NOTCH control to 12 o'clock
      f. NOTCH button ON (depressed)
   3. Tune the RF generator 1.5 kHz above the receiver frequency and adjust L3011 for minimum S-meter deflection. Then adjust VR3007 for best null of the 1.5 kHz heterodyne in the loudspeaker.

J. Noise Blanker (on RX Unit - requires RF generator and DC voltmeter)
   1. With the RF generator connected to the 144 MHz antenna jack, connect the DC voltmeter to point "B" in the diagram on the page 64.
   2. Tune the transceiver and RF generator to the center of the 2m band, and inject a 20dBu carrier with no modulation.
   3. Select the USB mode, set the RF gain fully clockwise and adjust T3006 and T3007 for minimum deflection on the voltmeter.
   4. Disconnect the voltmeter.

K. 144 MHz Receiver Overall Check
   1. Connect the test equipment as shown below.



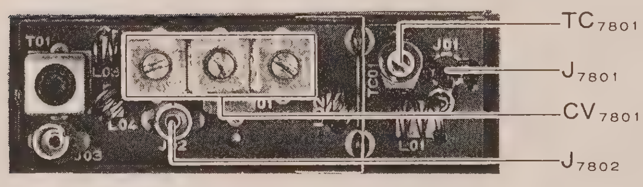
   2. Select FM mode, set the METER selector to S/PO, SQL fully counterclockwise, AF gain to 10 o'clock and RF gain fully clockwise.
   3. Tune the transceiver and RF generator to the center of the 2m band and set the injection level for S-9 indication with ±3.5 kHz deviation of a 1 kHz tone.

ALIGNMENT (Receiver)

4. Tune the transceiver and RF generator to the high and low band edges and confirm that the injection level required for S-9 indication is within ±3dB of that at band center.
5. Retune the transceiver and RF generator to band center, and confirm that 12dB SINAD is better than -9dB.
6. Select the USB mode and set the injection level to -10dB with no modulation. Confirm at least 12dB (S+N)/N.
7. Remove the test equipment.

L. 430 MHz RX RF (on 430 MHz Front End Unit - requires tracking generator and spectrum analyzer)

1. Connect the tracking generator to J7801 and the analyzer to J7082. Set the tracking generator level to about -30dBm, and reduce it if necessary to avoid saturation.
2. Adjust TC7801 and CV7801 for less than ±5dB ripple between 430 and 450 MHz.



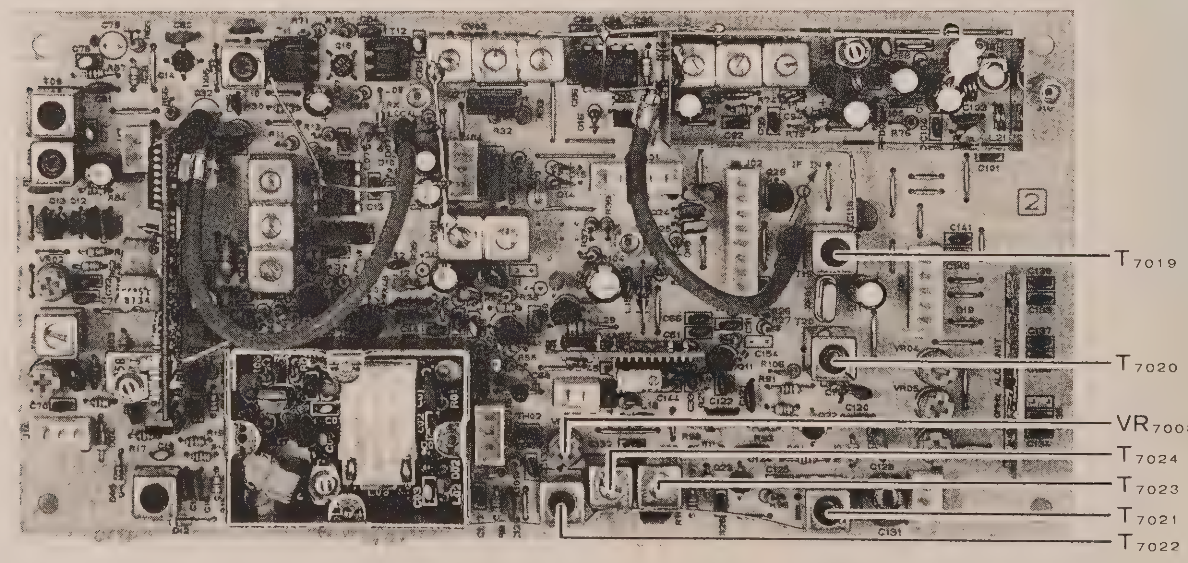
430MHz FRONTEND UNIT ALIGNMENT POINTS

M. 430 MHz RX IF (on 430 MHz RX Uni - requires RF generator)

1. Connect the RF generator to th 430 MHz antenna jack.
2. Set the transceiver to FM, METE selector to S/PO and RF gai fully clockwise.
3. Tune the RF generator and transceiver to the center of the 70cm band, and inject ±7 kHz deviatio of a 1 kHz tone at a level sufficient to produce S-7 deflection o the S-meter.
4. Adjust T7019-T7024 for peak S-meter deflection.

N. 430 MHz Module Gain (on 430 MH RX Unit - requires RF generator)

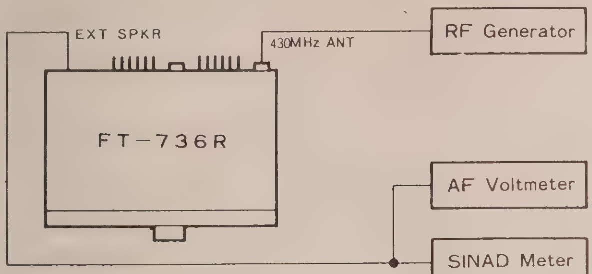
1. Connect the RF generator to the 430 MHz antenna jack.
2. Set the transceiver to USB, METE selector to S/PO and RF gai fully clockwise.
3. Tune the transceiver to the cente of the 70cm band.
4. Inject a 20dBu carrier with n modulation 1.5 kHz above the transceiver frequency, and adjus VR7003 for S-9 deflection on the S-meter.



430MHz RX UNIT ALIGNMENT POINTS

O. 430 MHz Receiver Overall Check

1. Connect the test equipment as shown below.



2. Select the FM mode, set the METER selector to S/PO, SQL fully counterclockwise, AF gain to 10 o'clock and RF gain fully clockwise.
3. Tune the transceiver and RF generator to the center of the 70cm band and set the injection level for S-9 indication with ±3.5 kHz deviation of a 1 kHz tone.
4. Tune the transceiver and RF generator to the high and low band edges and confirm that the injection level required for S-9 indication is within ±3dB of that at band center.
5. Retune the transceiver and RF generator to band center, and confirm that 12dB SINAD is better than -9dB.
6. Select the USB mode and set the injection level to -10dB with no modulation. Confirm at least 12dB (S+N)/N.
7. Remove the test equipment.

IV. FEX-736-50

A. 50 MHz PLL Sub Loop (on 50 MHz PLL Unit - requires oscilloscope and DC voltmeter)

1. Connect the 'scope to TP1001 and the DC voltmeter between TP1002 and chassis ground.
2. Tune the transceiver to 52.00000 MHz, CW mode, and adjust T1002-T1005 for maximum amplitude on the 'scope.
3. Retune the transceiver to 52.01999 MHz and adjust L1016 for 4.2V on the voltmeter.
4. Retune the transceiver to 52.02000 MHz and confirm at least 0.6V on the voltmeter.
5. Disconnect the 'scope and voltmeter.

B. 50 MHz PLL VCXO (on 50 MHz PLL Unit - requires DC voltmeter)

1. Connect the voltmeter between the exposed lead of R1055 and chassis ground.
2. Tune the transceiver to 52.01999 MHz, CW mode, and adjust L1009 for 6.0V on the voltmeter.
3. Retune the transceiver to 52.02000 MHz and confirm at least 1.0V on the voltmeter.
4. Disconnect the voltmeter.

C. 50 MHz PLL Main Loop (on 50 MHz PLL Unit - requires DC and RF voltmeters)

1. Connect the DC voltmeter between the exposed lead of R1022 and chassis ground. Connect the RF voltmeter to pin 1 of J1001.
2. Tune the transceiver to 53.99999 MHz, CW mode, and adjust L1003 for 6.0V on the voltmeter.
3. Retune the transceiver to 50.00000 MHz and confirm at least 2.0V on the DC voltmeter.
4. Retune the transceiver to 52.00000 MHz and adjust T1001 for maximum on the RF voltmeter.
5. Disconnect the voltmeters.

ALIGNMENT (FEX-736-50)

D. 50 MHz RX (on 50 RF Unit - require RF generator)

1. Connect the RF generator to the 50 MHz antenna jack.
2. Set the transceiver to FM mode, the METER selector to S/PO and RF gain fully clockwise.
3. Tune the transceiver and RF generator to 52.00000 MHz. Inject a 1 kHz tone with ±7 kHz deviation at a level sufficient to produce an S-7 reading on the S-meter.
4. Adjust T2001-T2004 and T2007-T2009 for peak S-meter deflection.

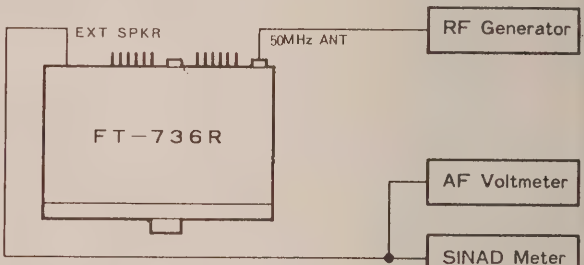
E. 50 MHz Module Gain (on 50 MHz RF Unit - requires RF generator)

1. Connect the RF generator to the 50 MHz antenna jack.
2. Set the transceiver to USB, METER selector to S/PO and RF gain fully clockwise.
3. Tune the transceiver to 52.00000 MHz.
4. Inject a 20dBu carrier with no modulation 1.5 kHz above the transceiver frequency, and adjust VR2001 for S-9 deflection on the S-meter.
5. Tune the transceiver and RF generator as indicated below, and confirm that the injection level required for S-9 indication is within ±3dB of that required at 52.00000 MHz.

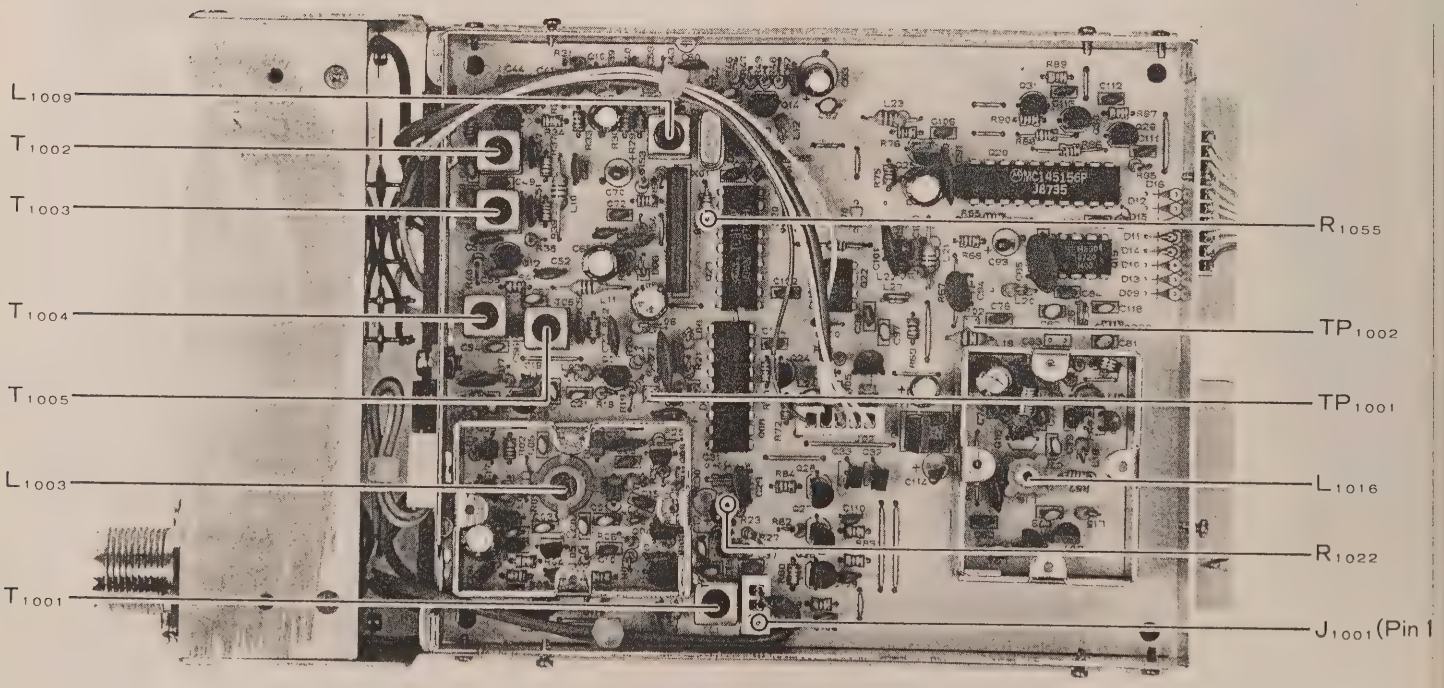
Transceiver	RF Generator
53.99999 MHz	54.00149 MHz
50.00000 MHz	50.00150 MHz

F. 50 MHz Receiver Overall Check

1. Connect the test equipment as shown below.



2. Select the FM mode, set the METER selector to S/PO, SQL fully counterclockwise, AF gain to 10 o'clock and RF gain fully clockwise.
3. Tune the transceiver and RF generator to 52.00000 MHz. Inject a 1 kHz tone with ±3.5 kHz deviation, and confirm a 12dB SINAD of -9dB or better.



50MHz PLL UNIT ALIGNMENT POINTS

4. Select the USB mode and set the injection level to -10dB with no modulation. Confirm at least 12dB (S+N)/N.
5. Remove the test equipment.

G. 50 MHz TX IF, Part I (on 50 MHz RF Unit - requires dummy load and wattmeter)

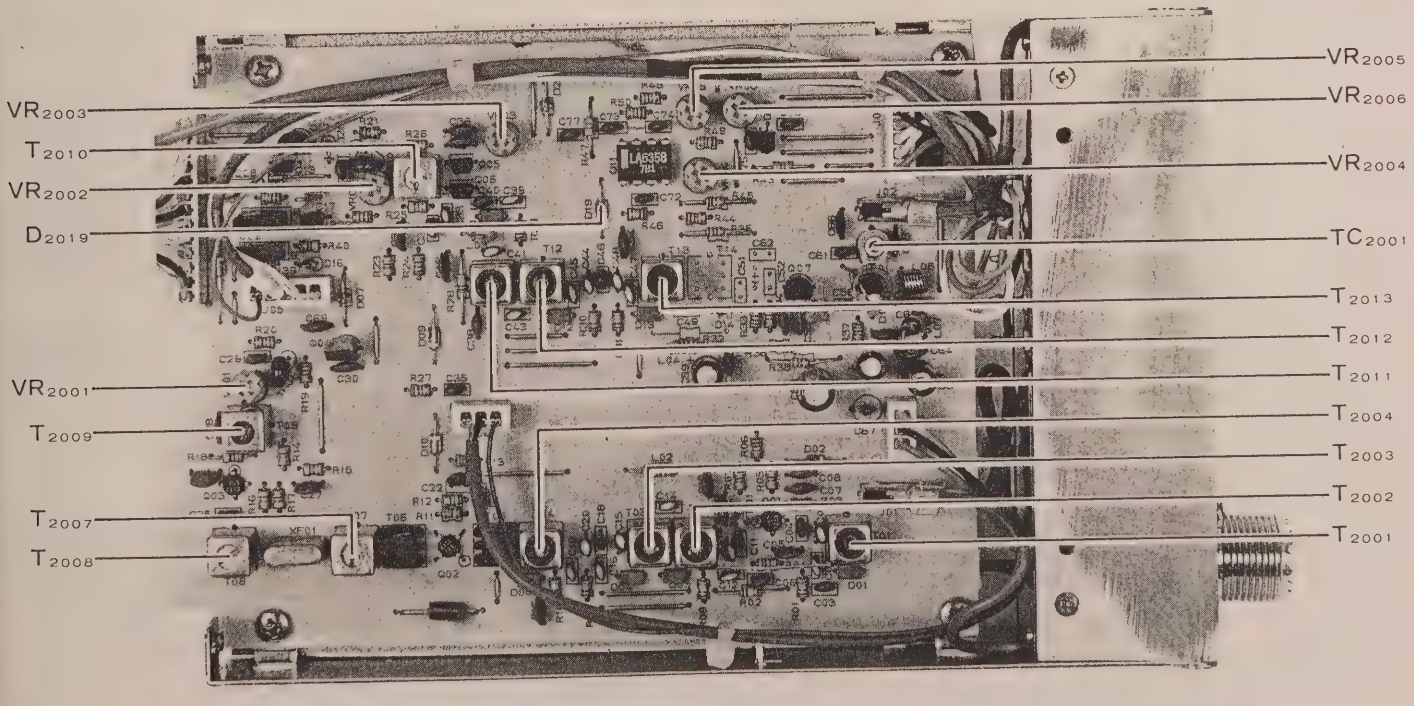
1. With the dummy load and wattmeter connected to the 50 MHz antenna jack, tune the transceiver to 52.00000 MHz, FM mode.
2. Press the MOX button and set the DRIVE control for 4W output.
3. Adjust T2010-T2013 and TC2001 for peak on the wattmeter, reducing the DRIVE control setting, if necessary, to keep power output below 5W during adjustments.
4. Press the MOX button again to return to receive.

H. 50 MHz AFP (Automatic Final Protection, on 50 MHz RF Unit, requires dummy load, wattmeter and DC voltmeter)

1. Set the transceiver to the FM mode, turn the DRIVE control
2. With the dummy load and wattmeter connected to the 50 MHz antenna jack, connect the DC voltmeter to the anode of D2019.
3. Press the MOX button and adjust VR2004 for 1.0V on the voltmeter.
4. Press the MOX button to return to receive, and remove the voltmeter.

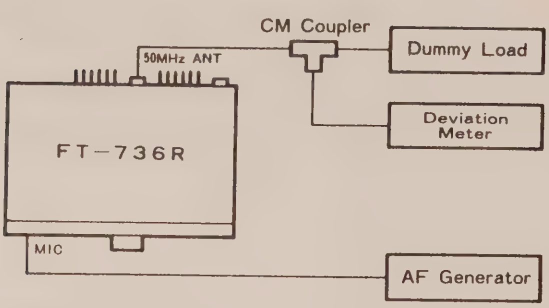
I. 50 MHz ALC level & PO Meter Sensitivity (on 50 MHz RF Unit - requires dummy load and wattmeter)

1. Set the transceiver to 52.00000 MHz, FM mode, and set the METER selector to the S/PO position.
2. With the dummy load and wattmeter connected to the 50 MHz antenna jack, set the DRIVE control fully clockwise.
3. Press the MOX button and alternately adjust VR2005 for 10W on the wattmeter and VR2006 for an indication of "8" on the PO meter scale, repeating both adjustments several times.
4. Press the MOX button to return to receive.



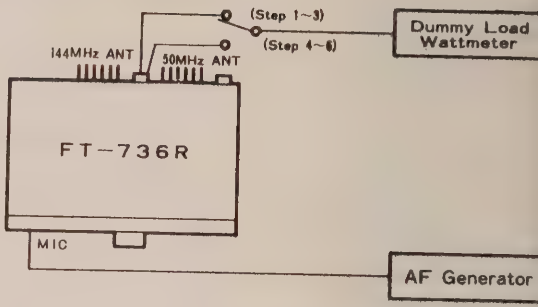
50MHz RF UNIT ALIGNMENT POINTS

J. 50 MHz TX Mixer (on 50 MHz RF Unit)



1. Connect the test equipment as shown in the diagram above.
2. In FM mode, tune the transceiver to 52.00000 MHz, FM mode. Set the MIC Gain fully counterclockwise and DRIVE fully clockwise.
3. Press the MOX button and adjust VR2003 so that the spurii at 13.79 MHz on either side of the carrier are at least 65dB down.
4. Press the MOX button again to return to receive.

K. 50 MHz TX IF, Part II (on 50 MH RF Unit)



1. Connect the test equipment as shown above, with the AF generator set for 3mV @ 1 kHz.
2. Set the transceiver to USB, at the center of the 144 MHz band.
3. Set the DRIVE control fully clockwise, press the MOX button to transmit, and adjust the MIC gain for 5W output. Press the MOX button again to return to receive.
4. Retune the transceiver to 52.00000 MHz.
5. Press the MOX button and adjust VR2002 for 5W output.
6. Press the MOX button to return to receive, and disconnect the test equipment.

V. FEX-736-220

A. 220 MHz PLL Sub Loop (on 220 MHz PLL Unit - requires oscilloscope and DC voltmeter)

1. Connect the 'scope to TP1001 and the DC voltmeter between TP1002 and chassis ground.
2. Tune the transceiver to 222.01999 MHz, CW mode, and adjust T1002-T1005 for maximum amplitude on the 'scope.
3. Adjust L1016 for 4.2V on the voltmeter.
4. Retune the transceiver to 222.02000 MHz and confirm at least 0.6V on the voltmeter.
5. Disconnect the 'scope and voltmeter.

B. 220 MHz PLL VCXO (on 220 MHz PLL Unit - requires DC voltmeter)

1. Connect the voltmeter between the exposed lead of R1055 and chassis ground.
2. Tune the transceiver to 222.01999 MHz, CW mode, and adjust L1009 for 6.0V on the voltmeter.
3. Retune the transceiver to 222.02000 MHz and confirm at least 1.0V on the voltmeter.
4. Disconnect the voltmeter.

C. 220 MHz PLL Main Loop (on 220 MHz PLL Unit - requires DC and RF voltmeters)

1. Connect the DC voltmeter between the exposed lead of R1022 and chassis ground. Connect the RF voltmeter to pin 1 of J1001.

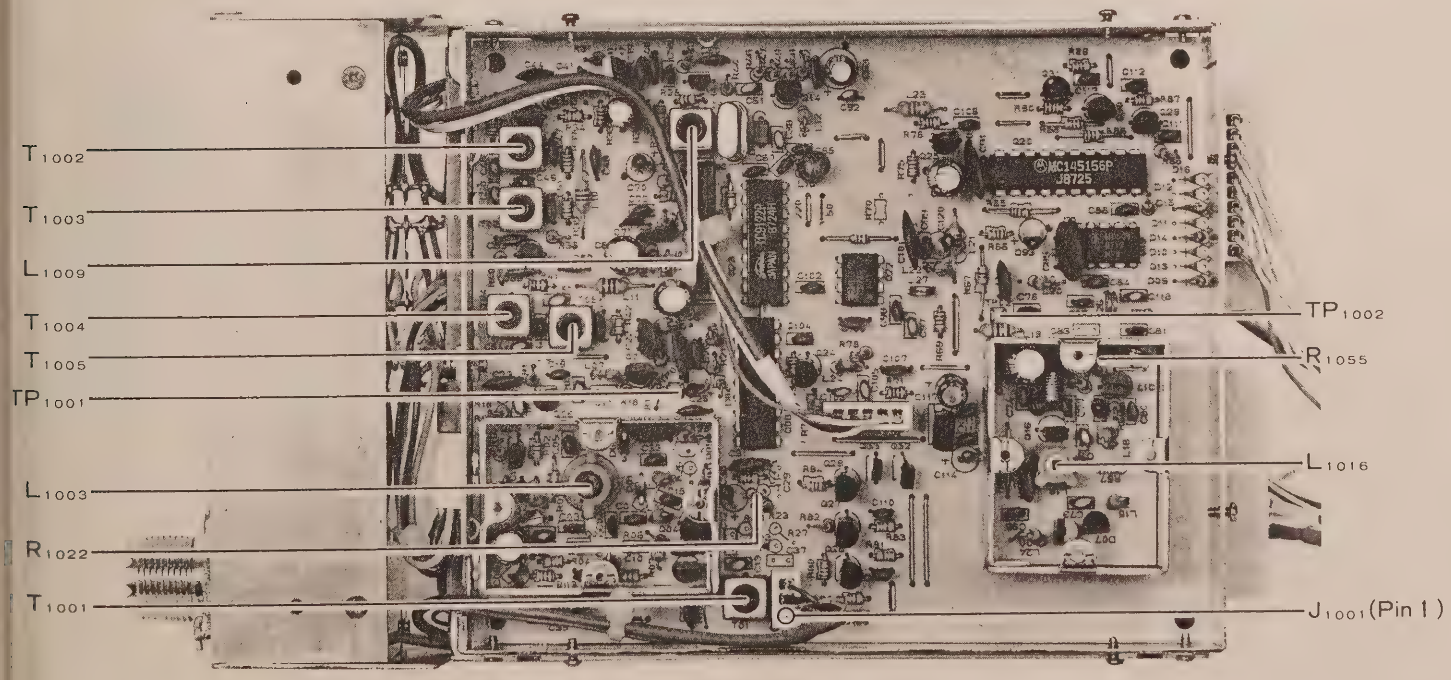
2. Tune the transceiver to 224.99999 MHz, CW mode, and adjust L1003 for 6.0V on the voltmeter.
3. Retune the transceiver to 220.00000 MHz and confirm at least 2.0V on the DC voltmeter.
4. Retune the transceiver to 222.50000 MHz and adjust T1001 for maximum on the RF voltmeter.
5. Disconnect the voltmeters.

D. 220 MHz RX (on 220 RF Unit-requires tracking generator and spectrum analyzer)
   1. Connect the tracking generator to the 220 MHz antenna jack and the analyzer to J2008. Set the tracking generator level to about -30dBm, reducing the level during adjustment, if necessary, to avoid saturation.
   2. Adjust T2001 and CV2001 for less ±3dB ripple between 220 and 225 MHz.
   3. Remove the test equipment.

E. 220 MHz 2nd Local (on 220 MHz RF Unit - requires oscilloscope)
   1. Connect the 'scope to the anode of D2002.
   2. Adjust T2016-T2018 for maximum amplitude on the 'scope.
   3. Remove the 'scope.

F. 220 MHz RX IF (on 220 MHz RF Unit - requires RF generator)
   1. Connect the RF generator to the 220 MHz antenna jack.
   2. Set the transceiver to FM, METER selector to S/PO and RF gain fully clockwise.
   3. Tune the RF generator and transceiver to 222.50000 MHz, and inject ±7 kHz deviation of a 1 kHz tone at a level sufficient to produce S-7 deflection on the S-meter.
   4. Adjust T2004-T2009 for peak S-meter deflection.

G. 220 MHz Module Gain (on 220 MHz RF Unit - requires RF generator)
   1. Connect the RF generator to the 220 MHz antenna jack.
   2. Set the transceiver to USB, METER selector to S/PO and RF gain fully clockwise.
   3. Tune the transceiver to 222.50000 MHz.
   4. Inject a 20dBu carrier with no modulation 1.5 kHz above the transceiver frequency, and adjust VR2001 for S-9 deflection on the S-meter.

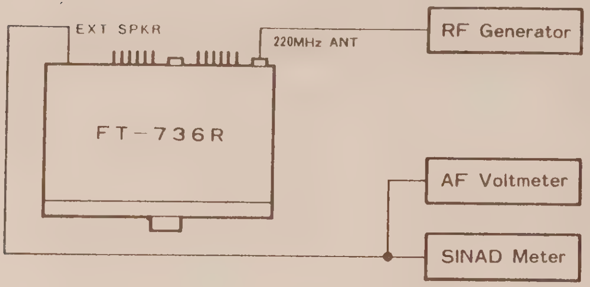


220MHz PLL UNIT ALIGNMENT POINTS

ALIGNMENT (FEX-736-220)

H. 220 MHz Receiver Overall Check

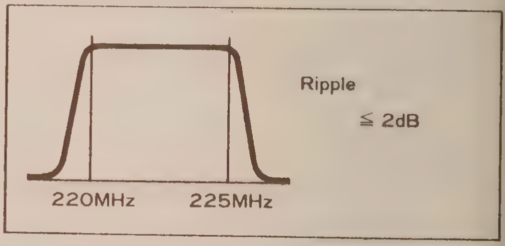
1. Connect the test equipment as shown below.

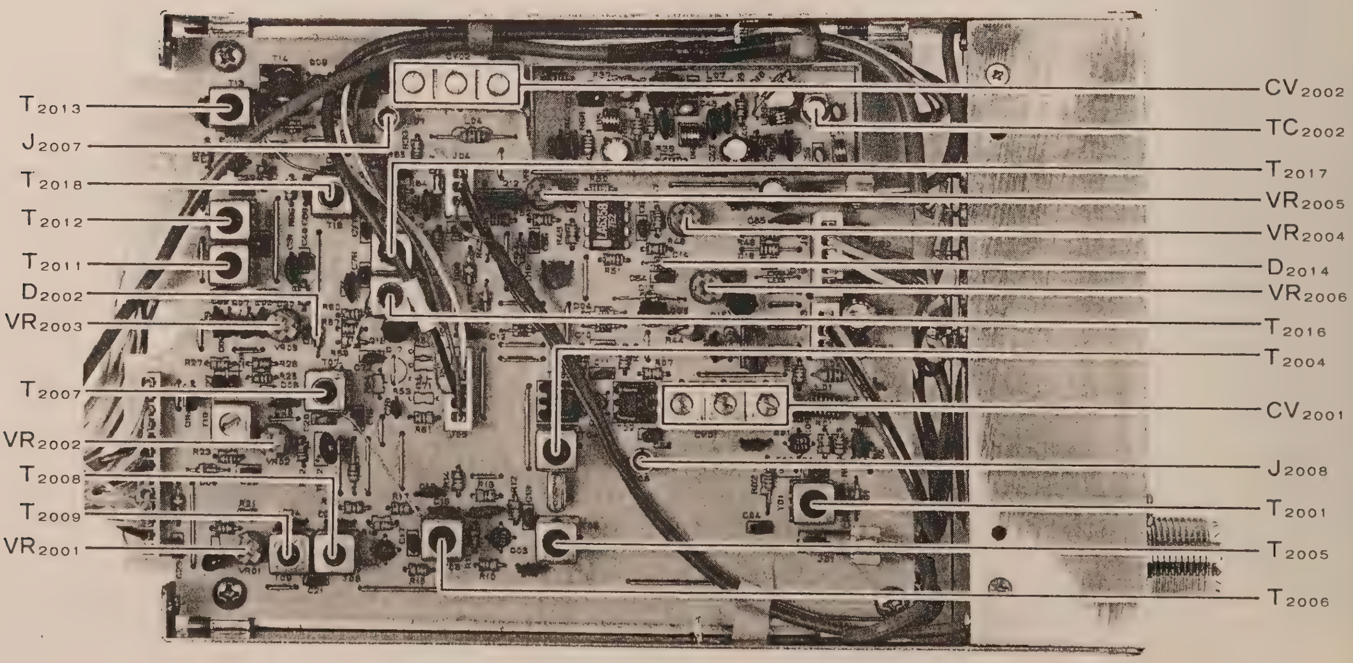


2. Select the FM mode, set the METER selector to S/PO, SQL fully counterclockwise, AF gain to 10 o'clock and RF gain fully clockwise.
3. Tune the transceiver and RF generator to 222.50000 MHz and set the injection level for S-9 indication with ±3.5 kHz deviation of a 1 kHz tone.
4. Tune the transceiver and RF generator to the high and low band edges and confirm that the injection level required for S-9 indication is within ±3dB of that at band center.
5. Retune the transceiver and RF generator to 222.50000 MHz, and confirm that 12dB SINAD is better than -9dB.
6. Select the USB mode and set the injection level to -10dB with no modulation. Confirm at least 12dB (S+N)/N.
7. Remove the test equipment.

I. 220 MHz TX RF (on 220 MHz RF Unit - requires tracking generator and spectrum analyzer)

1. Connect the tracking generator to J2007 and couple the spectrum analyzer to the 220 MHz antenna jack.
2. Set the tracking generator output to -30dBm and adjust CV2002 for the passband shown (reducing injection level, if necessary, to avoid saturation).
3. Remove the test equipment.





220MHz RF UNIT ALIGNMENT POINTS

J. 220 MHz TX IF, Part I (on 220 MHz RF Unit - requires dummy load and wattmeter)

1. With the dummy load and wattmeter connected to the 220 MHz antenna jack, tune the transceiver to 222.50000 MHz, FM mode.
2. Press the MOX button and set the DRIVE control for 4W output.
3. Adjust T2011-T2013 and TC2002 for maximum deflection on the wattmeter (but do not exceed 5W output: reduce the DRIVE control setting, if necessary).
4. Press the MOX button again to return to receive.

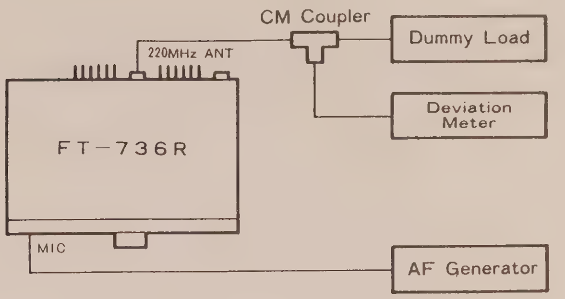
K. 220 MHz AFP (Automatic Final Protection, on 220 MHz RF Unit -requires dummy load and DC voltmeter)

1. With the dummy load connected to the 220 MHz antenna jack, connect the DC voltmeter to the anode of D2014.
2. Set the transceiver to FM, 222.50000 MHz and set the DRIVE control fully clockwise
3. Press the MOX button and adjust VR2004 for 1.0V on the DC voltmeter.
4. Press the MOX button again to return to receive, and remove the voltmeter.

L. 220 MHz ALC level & PO Meter Sensitivity (on 220 MHz RF Unit - requires dummy load and wattmeter)

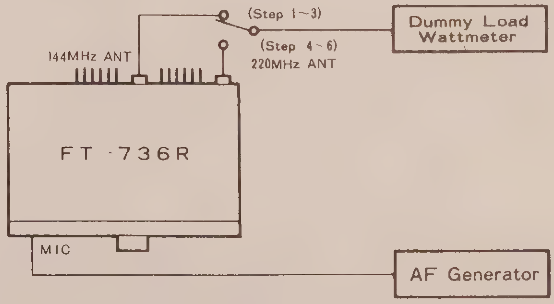
1. Set the transceiver to 222.50000 MHz, FM mode, and set the METER selector to the S/PO position.
2. With the dummy load and wattmeter connected to the 220 MHz antenna jack, set the DRIVE control fully clockwise.
3. Press the MOX button and alternately adjust VR2005 for 25W on the wattmeter and VR2006 for an indication of "8" on the PO meter scale, repeating both adjustments several times.
4. Press the MOX button to return to receive.

M. 220 MHz TX Mixer (on 220 RF Unit)



1. Connect the test equipment as shown in the diagram above.
2. In FM mode, tune the transceiver to 222.50000 MHz. Set the MIC gain fully counterclockwise and DRIVE fully clockwise.
3. Press the MOX button and adjust VR2003 so that the spurii at 13.79 MHz on either side of the carrier are at least 65dB down.
4. Press the MOX button again to return to receive.
5. Disconnect the test equipment.

N. 220 MHz TX IF, Part II (on 220 MHz RF Unit)



1. Connect the test equipment as shown above, with the AF generator set for 3mV @ 1 kHz.
2. Set the transceiver to USB, at the center of the 144 MHz band.
3. Set the DRIVE control fully clockwise, press the MOX button to transmit, and adjust the MIC gain for 5W output. Press the MOX button again to return to receive.
4. Retune the transceiver to 222.50000 MHz.
5. Press the MOX button and adjust VR2002 for 5W output.
6. Press the MOX button to return to receive, and disconnect the test equipment.

ALIGNMENT (FEX-736-1.2)

VI. FEX-736-1.2

A. 1.2 GHz PLL 2nd Local (on 1.2 GHz PLL Unit - requires DC voltmeter)

1. Connect the voltmeter between R1096 ("A" in the diagram below) and chassis ground.
2. Tune the transceiver to 1280.00000 MHz, FM mode, and adjust TC1001 for 4.0V on the voltmeter.
3. Remove the voltmeter.

B. 1.2 GHz PLL Sub Loop (on 1.2 GHz PLL Unit - requires DC voltmeter)

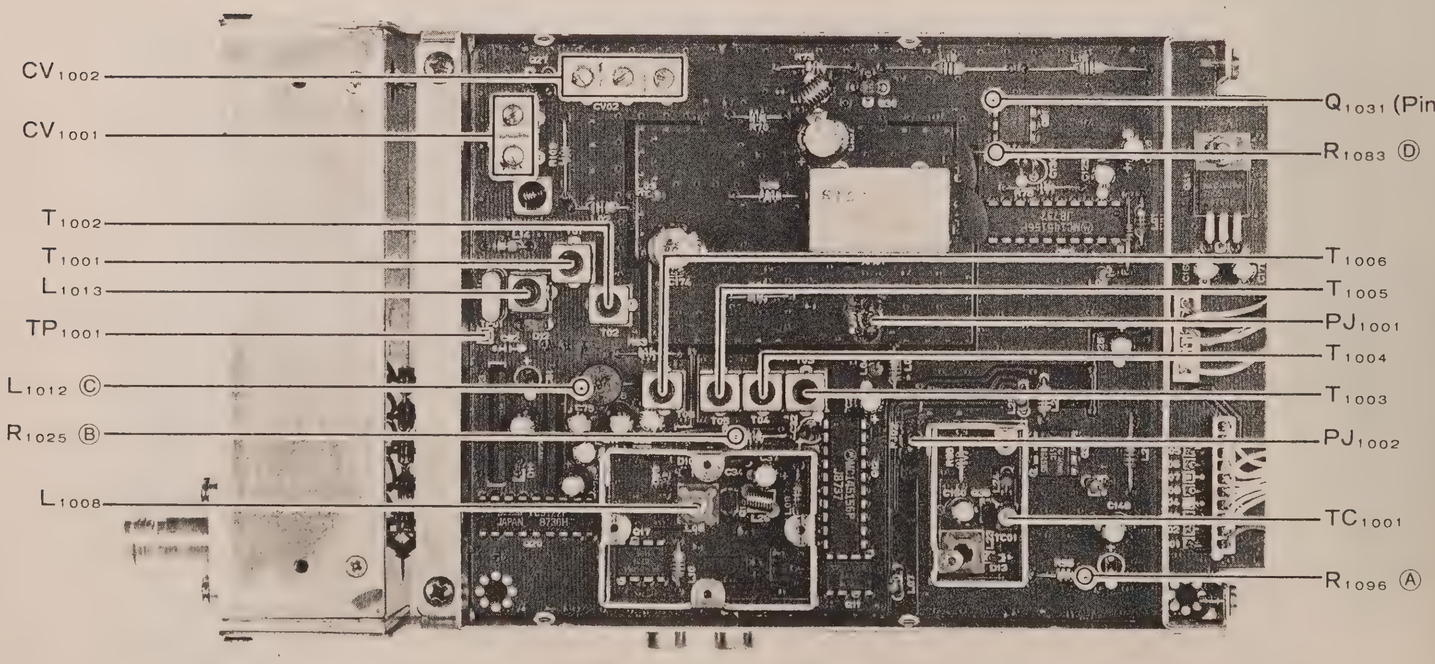
1. Connect the DC voltmeter between R1025 ("B" in the diagram below) and chassis ground.
2. Tune the transceiver to 1280.01999 MHz, USB mode, and adjust L1008 for 7.5V on the voltmeter.
3. Retune the transceiver to 1280.02000 MHz and confirm at least 1.0V on the voltmeter.
4. Disconnect the voltmeter.

C. 1.2 GHz PLL VCXO (on 1.2 GHz PLL Unit - requires AF and DC voltmeters)

1. Connect the AF millivoltmeter between L1012 ("C" in the diagram below) and chassis ground.
2. Connect the DC voltmeter between TP1001 and chassis ground.
3. Tune the transceiver to 1280.0000 MHz, USB mode, and adjust T1001-T1006 for peak on the AF millivoltmeter.
4. Retune the transceiver t 1280.01999 MHz and adjust L101 for 4.5V on the DC voltmeter.
5. Retune the transceiver t 1280.02000 MHz and confirm a least 1.0V on the DC voltmeter.
6. Disconnect the voltmeters.

D. 1.2 GHz PLL Main Loop (on 1.2 GH PLL Unit - requires DC and RF voltmeters)

1. Connect the DC voltmeter betwee R1083 ("D" in the diagram below and chassis ground. Connect the RF voltmeter to pin 1 of Q1031.
2. Tune the transceiver to the hig band edge, USB mode, and adjus CV1001 and CV1002 for peak o the RF voltmeter. Confirm abou 6.0V on the DC voltmeter.
3. Retune the transceiver to the lo band edge and confirm at leas 1.5V on the DC voltmeter.
4. Disconnect the voltmeters.



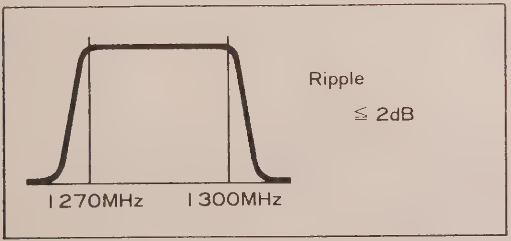
1.2GHz PLL UNIT ALIGNMENT POINTS

E. 1.2 GHz PLL Overall Check (on 1.2 GHz PLL Unit - requires 50-ohm, ¼-watt resistor and RF voltmeter)

1. Disconnect the TMP plug from PJ1002 and connect the 50-ohm resistor and RF voltmeter in its place.
2. Tune the transceiver to 1280.00000 MHz, FM mode, and confirm about -15dBm on the voltmeter.
3. Move the resistor and meter from PJ1002 to PJ1001 and confirm about +5dBm on the RF voltmeter.
4. Remove the resistor and meter, and replace the TMP plugs.

F. 1.2 GHz RX RF (on 1.2 GHz RF Unit-requires tracking generator and spectrum analyzer)

1. Connect the tracking generator to PJ2002 and the analyzer to PJ2003. Set the tracking generator level to about -30dBm, reducing the level during adjustment, if necessary, to avoid saturation.
2. Adjust CV2001 for the passband shown below.
3. Remove the test equipment.



G. 1.2 GHz RX IF (on 1.2 GHz RF Unit - requires RF generator)

1. Connect the RF generator to the 1.2 GHz antenna jack.
2. Set the transceiver to FM, METER selector to S/PO and RF gain fully clockwise.
3. Tune the RF generator and transceiver to 1280.00000 MHz, and inject ±7 kHz deviation of a 1 kHz tone at a level sufficient to produce S-7 deflection on the S-meter.
4. Adjust T2001-T2010 for peak S-meter deflection.

H. 1.2 GHz Module Gain (on 1.2 GHz RF Unit - requires RF generator)

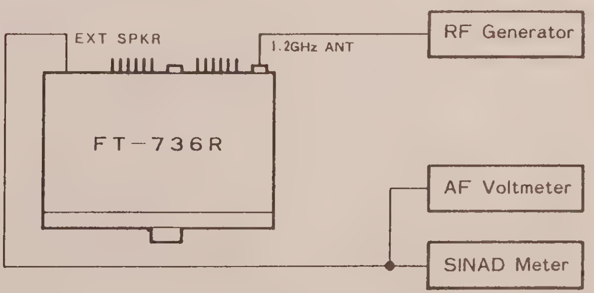
1. Connect the RF generator to the 1.2 GHz antenna jack.
2. Set the transceiver to USB, METER selector to S/PO and RF gain fully clockwise.
3. Tune to 1280.00000 MHz.
4. Inject a 20dBu carrier with no modulation 1.5 kHz above the transceiver frequency, and adjust VR2004 for S-9 S-meter deflection.
5. Tune the transceiver and RF generator as indicated below, and confirm that the injection level required for S-9 indication is within ±3dB of that required at 1280.00000 MHz.

Transceiver	RF Generator
1299.99999 MHz	1300.00149 MHz
1260.00000 MHz	1260.00150 MHz

6. Connect the jumper plug at J2001 and retune the transceiver to 1280.00000 MHz.
7. Inject a 40dB carrier with no modulation 1.5 kHz above the transceiver frequency, and adjust TC2001 for S-9 S-meter deflection.

I. 1.2 GHz Receiver Overall Check

1. Connect the test equipment as shown below.

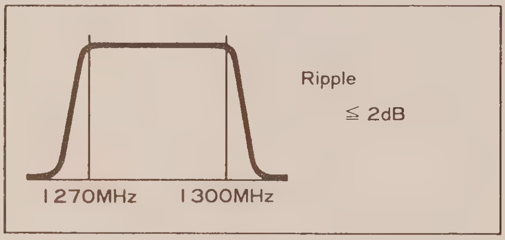


2. Select the FM mode, set the METER selector to S/PO, SQL fully counterclockwise, AF gain to 10 o'clock and RF gain fully clockwise.
3. Tune the transceiver and RF generator to 1280.00000 MHz. Inject a 1 kHz tone with ±3.5 kHz deviation, and confirm a 12dB SINAD better than -9dB.

4. Select the USB mode and set the injection level to -10dB with no modulation. Confirm at least 12dB (S+N)/N.
5. Remove the test equipment.

J. 1.2 GHz TX RF (on 1.2 GHz RF Unit-requires tracking generator and spectrum analyzer)

1. Connect the tracking generator to PJ2004 and the spectrum analyzer to PJ2001.
2. Set the tracking generator output to -30dBm and adjust CV2003 and CV2004 for the passband shown below (reducing injection level, if necessary, to avoid saturation).
3. Remove the test equipment.



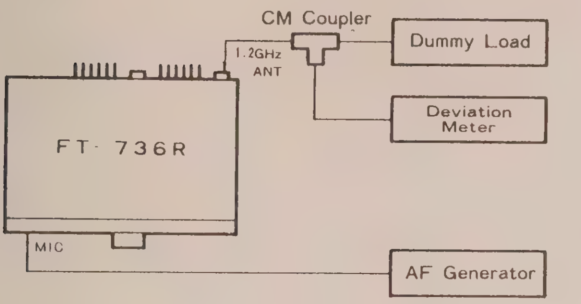
K. 1.2 GHz TX IF, Part I (on 1.2 GHz RF Unit - requires dummy load and wattmeter)

1. With the dummy load and wattmeter connected to the 1.2 GHz antenna jack, tune the transceiver to 1280.00000 MHz, FM mode.
2. Press the MOX button and set the DRIVE control for 4W output.
3. Adjust T2011 and T2013-T2016 for maximum deflection on the wattmeter (but do not exceed 5W output: reduce the DRIVE control setting, if necessary).
4. Press the MOX button again to return to receive.

L. 1.2 GHz ALC level & PO Meter Sensitivity (on 1.2 GHz RF Unit - requires dummy load and wattmeter)

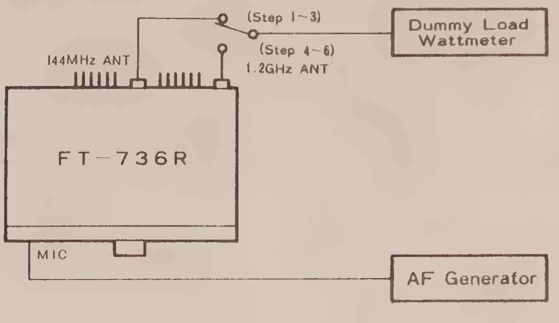
1. Set the transceiver to 1280.00000 MHz, FM mode, and set the METER selector to the S/PO position.
2. With the dummy load and wattmeter connected to the 1.2 GHz antenna jack, set the DRIVE control fully clockwise.
3. Press the MOX button and alternately adjust VR2002 for 10W on the wattmeter and VR2003 for an indication of "8" on the PO meter scale, repeating both adjustments several times.
4. Press the MOX button to return to receive.

M. 1.2 GHz TX Mixer (on 1.2 GHz RF Unit)

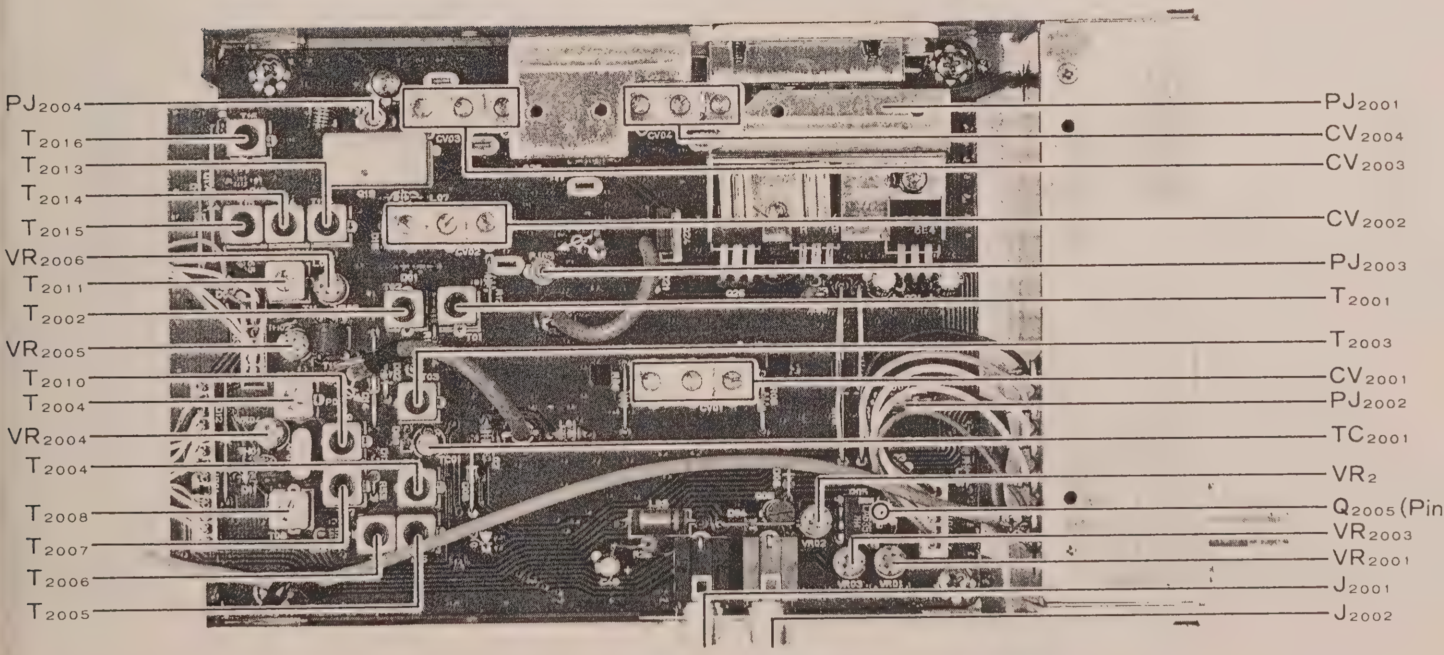


1. Connect the test equipment as shown in the diagram above.
2. In FM mode, tune the transceiver to 1280.00000 MHz. Set the MIC gain fully counterclockwise and DRIVE fully clockwise.
3. Press the MOX button and adjust VR2003 so that the spurii at 13.79 MHz on either side of the carrier are at least 65dB down.
4. Press the MOX button again to return to receive.
5. Disconnect the test equipment.

N. 1.2 GHz TX IF, Part II (on 1.2 GHz RF Unit)



1. Connect the test equipment as shown above, with the AF generator set for 3mV @ 1 kHz.
2. Set the transceiver to USB, at the center of the 144 MHz band.
3. Set the DRIVE control fully clockwise, press the MOX button to transmit, and adjust the MIC gain for 5W output. Press the MOX button again to return to receive.
4. Retune the transceiver to 1280.00000 MHz, FM mode.
5. Press the MOX button and adjust VR2005 for 5W output.
6. Press the MOX button to return to receive, and disconnect the test equipment.



1.2GHz RF UNIT ALIGNMENT POINTS

NOTES

PARTS LIST

MAIN CHASSIS

mbol No.	Part No.	Description	Device
	G1090294	IC	uPC7808H
	G1090778	IC	L7809
	G1090778	IC	L7809
	G3334200G	Transistor	2SC3420GR
(10W)	J01225682	Carbon Film RES.	1/6W 6.8k ohm PJ
	K21170002	Feed Through CAP.	50WV 0.001uF
	K21170002	Feed Through CAP.	50WV 0.001uF
	K21170002	Feed Through CAP.	50WV 0.001uF
	K21170002	Feed Through CAP.	50WV 0.001uF
0	K21170002	Feed Through CAP.	50WV 0.001uF
1	K21170002	Feed Through CAP.	50WV 0.001uF
2	K21170002	Feed Through CAP.	50WV 0.001uF
3	K21170002	Feed Through CAP.	50WV 0.001uF
4	K21170002	Feed Through CAP.	50WV 0.001uF
5	K21170002	Feed Through CAP.	50WV 0.001uF
	L2190002	Coil	
	L9190035	Ferrite Beads	
	M0290055	Meter	
1	M4090047	Speaker	
	N4090020	Push Switch	
	T9205548A	Connector (13.8V DC)	
	P0090608	Connector (AC)	
	P1090352	Connector (144MHz ANT)	
(M Type)	P1090352	Connector (430MHz ANT)	
(N Type)	P1090547	Connector (430MHz ANT)	
00,117V)	Q0000006	Fuse	4A
20,234V)	Q0000003	Fuse	2A
1	P2000012	Fuse Holder	
1	Q1000047	Lamp	
2	Q1000047	Lamp	
	Q9000358A	Rotary Encoder	MAIN DIAL
	T9205498	Wire ASSY	P1-P48,P49
	T9205499C	Wire ASSY	P2-P33,P34,P41
	T9205500A	Wire ASSY	P3-P53,P54
	T9205501C	Wire ASSY	P5-P82
	T9205502B	Wire ASSY	P6-P96
	T9205503	Wire ASSY	P11-P125
	T9205504	Wire ASSY	P12-P27
	T9205505	Wire ASSY	P13-P23,P26
	T9205506	Wire ASSY	P14-P28
	T9205507A	Wire ASSY	P15-P29
	T9205508	Wire ASSY	P16-P101
	T9205509	Wire ASSY	P17
	T9205510	Wire ASSY	P19-P108,P110
	T9205511A	Wire ASSY	P20-P126
	T9205512	Wire ASSY	P21-P106
	T9205513B	Wire ASSY	MIC JACK
	T9205514	Wire ASSY	P25-P59
	T9205515A	Wire ASSY	P30-P64
	T9205516A	Wire ASSY	P31-P18
	T9205517	Wire ASSY	P32-P105
	T9205518	Wire ASSY	P35-P116
	T9205519	Wire ASSY	P36-P127
	T9205520	Wire ASSY	P37-P124
	T9205521	Wire ASSY	P38-P113,P115,P116
	T9205522	Wire ASSY	P39-P52
	T9205523	Wire ASSY	P40-P70
	T9205524A	Wire ASSY	P42-P4
	T9205525	Wire ASSY	P43-P50
	T9205526B	Wire ASSY	P44-P71,P119
	T9205527A	Wire ASSY	P45
	T9205528	Wire ASSY	P56-P63
	T9205529A	Wire ASSY	P57-P46
	T9205530	Wire ASSY	P58-P114
	T9205531A	Wire ASSY	P60-P112,P121
	T9205532	Wire ASSY	P61-P100
	T9205533A	Wire ASSY	P65-P118
	T9205534	Wire ASSY	P68-P75,P76,P79
	T9205535	Wire ASSY	P69-P23,P24,P83,P93,P94
	T9205536B	Wire ASSY	P72-P73
	T9205537	Wire ASSY	P77
	T9205538B	Wire ASSY	P92-P84-P97-P91
	T9205540	Wire ASSY	P86-P99
	T9205542A	Wire ASSY	P103-P120
	T9205543A	Wire ASSY	P123-P128
	T9205609	Wire ASSY	P88
	T9205547E	Wire ASSY	
	T9205553	Wire ASSY	P109
	T9316102	Wire ASSY	P95-P87
	R0804550B	Chassis	
	R0509930	Panel Rear	
	R5804580A	Heat Sink	
	R0509940	Shield Case PA.	
	R0804620B	Front Panel	
	R1804590	Case Top	
	R1804600	Case Bottom	
	R7082630	SP Net	
	R0083600	Mount Spring	
	R3084745	Handle	
	R0115070	Handle Shaft	
	R4115020	Handle End	
	R3054370	Foot	30
	S4000025	Foot	FF-008
	R6025944B	Support D	
	R6119640	Nut	
	S6000032	Nylon Rivet	3.0x5.5
	S6000031	Nylon Rivet	3.0x4.5
	R1122150	Cover	
	R0123770	Ground Lead	
	S5000057	Lead Clamper	L=38
	R6124610	Support	
	R0804610	Panel	
	R7121180	Window	
	R8116670	Plate	
	R3116100A	Knob	MAIN DIAL
	R3078110C	Ring	MAIN DIAL
	R3121200	Knob	PRI,0
	R3121201	Knob	VFO,1
	R3121202	Knob	MR,2
	R3121203	Knob	PMS,3
	R3121204	Knob	V◂M,4
	R3121205	Knob	REV,5
	R3121206	Knob	STEP,6
	R3121207	Knob	MCK,7
	R3121208	Knob	TSET,8
	R3121209	Knob	V▸M,9
	R3121210	Knob	CLAR,CODE
	R3121211	Knob	BAND,SHIFT
	R3121212	Knob	CALL1,*
	R3121213	Knob	CALL2,#
	R3121214	Knob	SPEAK
	R3115320	Knob	UP
	R3115330	Knob	DOWN
	R3115340	Knob	CH UP
	R3115350	Knob	CH DOWN
	R3116820	Knob	MODE,RESET,CAC, AQS,DSQL
	R3115310	Knob	POWER
	R3115390A	Knob	MOX
	R3115400B	Knob	PROC,KEYER,BURST, PAUSE,DIM,VFO,F, ENT,T CALL PREAMP
	R3119630	Knob	D LOCK,FMCH,SSBCH, NB,NOTCH
	R3111182	Knob	VOX,KEYER SPEED, AGC
	R3101020B	Knob	FT-14VK(METER,SAT)
	R3085851	Knob	FT-18XK(MONITOR)
	R3510180	Knob	CHANNEL
	R3100770B	Knob	FT-13WK (MIC,SQL,AF,SHIFT)

PARTS LIST

	R6100760A	Knob	FT-18D (DRIVE, TONE, RF, NOTCH)
	Q6000093	Terminal	
	Q6000001	Terminal Strip	
	Q9000078	Terminal	
	S2000006	Color Cap	
	Q7000065	Power Supply	

RX UNIT

Symbol No.	Part No.	Description	Device
	F2887101A	Printed Circuit Board	
	C028871AA	PCB with Components w/o AF-LPF UNIT, FM-SCAN UNIT, SSB-SCAN UNIT, 13MHz-RX-PLL UNIT	
	C028871AB	PCB with Components w/o AF-LPF UNIT, FM-SCAN UNIT, SSB-SCAN UNIT, 13MHz-RX-PLL UNIT	
Q3001	G3305350A	Transistor	2SC535A
Q3002	G3304600B	Transistor	2SC460B
Q3003	Q1090101	IC	uPC1037H
Q3004	G3304600B	Transistor	2SC460B
Q3005	G3305350B	Transistor	2SC535B
Q3006	G3801250	FET	2SK125
Q3007	G3802410G	FET	2SK241GR
Q3008	G3802410G	FET	2SK241GR
Q3009	G3305350B	Transistor	2SC535B
Q3010	G3304580C	Transistor	2SC458C
Q3011	G3304580C	Transistor	2SC458C
Q3012	G3304580C	Transistor	2SC458C
Q3013	G3304580C	Transistor	2SC458C
Q3016	G3304580C	Transistor	2SC458C
Q3017	G3304580C	Transistor	2SC458C
Q3018	G3304580C	Transistor	2SC458C
Q3019	G3305350B	Transistor	2SC535B
Q3020	G3304580C	Transistor	2SC458C
Q3021	G1090072	IC	uPC577H
Q3022	G3304580C	Transistor	2SC458C
Q3023	G3304580C	Transistor	2SC458C
Q3024	G3090079	Transistor	BA1A4P
Q3025	G3090079	Transistor	BA1A4P
Q3026	G3090079	Transistor	BA1A4P
Q3027	G3090079	Transistor	BA1A4P
Q3028	G3304580C	Transistor	2SC458C
Q3029	G3304580C	Transistor	2SC458C
Q3030	G3090074	Transistor	BA1A4M
Q3031	G3304580C	Transistor	2SC458C
Q3032	G4800740L	FET	3SK74L
Q3033	G3304580C	Transistor	2SC458C
Q3034	G3304580C	Transistor	2SC458C
Q3035	G3304580C	Transistor	2SC458C
Q3036	G4800740L	FET	3SK74L
Q3037	G3304580C	Transistor	2SC458C
Q3038	G3304580C	Transistor	2SC458C
Q3039	G3304580C	Transistor	2SC458C
Q3040	G3090079	Transistor	BA1A4P
Q3041	G3090079	Transistor	BA1A4P
Q3042	G3090076	Transistor	BA1A4L
Q3043	G3090076	Transistor	BA1A4L
Q3044	G3090076	Transistor	BA1A4L
Q3045	G3090076	Transistor	BA1A4L
Q3046	G1090101	IC	uPC1037H
Q3047	G3090075	Transistor	BN1A4P
Q3048	G3090075	Transistor	BN1A4P
Q3049	G3802410G	FET	2SK241GR
Q3054	G3090079	Transistor	BA1A4P
Q3055	G3107331P	Transistor	2SA733AP
Q3056	G3090079	Transistor	BA1A4P
D3001	G2022080	Diode	1S2208
D3002	G2090027	Diode	1SS53
D3003	G2090027	Diode	1SS53
D3004	G2090180	Diode	FC53M-5
D3005	G2090408	Diode	1SS270
D3006	G2090408	Diode	1SS270
D3007	G2015880	Diode	1S1588
D3008	G2015880	Diode	1S1588
D3009	G2015880	Diode	1S1588
D3010	G2001880F	Diode	1S188FM1
D3011	G2001880F	Diode	1S188FM1
D3012	G2090118	Diode	1SS97
D3013	G2090338	Diode	1SS81
D3014	G2090338	Diode	1SS81
D3015	G2090338	Diode	1SS81
D3016	G2090338	Diode	1SS81
D3017	G2090027	Diode	1SS53
D3018	G2090027	Diode	1SS53
D3019	G2090338	Diode	1SS81
D3020	G2090338	Diode	1SS81
D3021	G2001880F	Diode	1S188FM1
D3022	G2001880F	Diode	1S188FM1
D3023	G2090118	Diode	1SS97
D3028	G2090408	Diode	1SS270
D3029	G2090023	Diode	1SV50
D3030	G2090408	Diode	1SS270
D3031	G2001880F	Diode	1S188FM1
D3032	G2001880F	Diode	1S188FM1
D3033	G2015550	Diode	1S1555
D3034	G2090408	Diode	1SS270
D3035	G2090408	Diode	1SS270
D3036	G2060004	Diode	1SS270TJ
D3037	G2090408	Diode	1SS270
D3038	G2090408	Diode	1SS270
D3039	G2090408	Diode	1SS270
D3040	G2090408	Diode	1SS270
D3041	G2090408	Diode	1SS270
D3042	G2090408	Diode	1SS270
D3043	G2090408	Diode	1SS270
D3044	G2090408	Diode	1SS270
D3045	G2090408	Diode	1SS270
D3046	G2090408	Diode	1SS270
D3047	G2090408	Diode	1SS270
D3048	G2090408	Diode	1SS270
D3049	G2090408	Diode	1SS270
D3050	G2090408	Diode	1SS270
D3051	G2090408	Diode	1SS270
D3052	G2090408	Diode	1SS270
D3054	G2090408	Diode	1SS270
TH3002	G9090035	Thermistor	
TH3005	G9090026	Thermistor	
TH3006	G9090035	Thermistor	
X3001	H0102813	XTAL	HC-49/T 13.2335M
X3002	H0102812	XTAL	HC-49/T 13.2365M
XF3001	H1102119	XTAL Filter	13M15A
XF3002	H1102073	XTAL Filter	XF-455MC
CF3001	H3900382	Ceramic Filter	LF-H12S
CF3002	H3900387	Ceramic Filter	LF-H8S
CF3003	H3900386	Ceramic Filter	CFJ455K14
CD3001	H7900010	Ceramic DISC.	455-D
R3001	J01225101	Carbon Film RES.	1/6W 100 ohm P
R3002	J02225332	Carbon Film RES.	1/6W 3.3k ohm U
R3003	J01225223	Carbon Film RES.	1/6W 22k ohm P
R3004	J02225223	Carbon Film RES.	1/6W 22k ohm U
R3005	J01225104	Carbon Film RES.	1/6W 100k ohm P
R3006	J01225102	Carbon Film RES.	1/6W 1k ohm P
R3007	J02225104	Carbon Film RES.	1/6W 100k ohm U
R3008	J02225332	Carbon Film RES.	1/6W 3.3k ohm U
R3009	J02225560	Carbon Film RES.	1/6W 56 ohm U
R3010	J01225223	Carbon Film RES.	1/6W 22k ohm P
R3011	J01225223	Carbon Film RES.	1/6W 22k ohm P
R3012	J02225223	Carbon Film RES.	1/6W 22k ohm U

3013	J02225104	Carbon Film RES.	1/6W 100k ohm	UJ
3014	J01225104	Carbon Film RES.	1/6W 100k ohm	PJ
3015	J02225104	Carbon Film RES.	1/6W 100k ohm	UJ
3016	J01225223	Carbon Film RES.	1/6W 22k ohm	PJ
3017	J02225223	Carbon Film RES.	1/6W 22k ohm	UJ
3018	J02225560	Carbon Film RES.	1/6W 56 ohm	UJ
3019	J02225222	Carbon Film RES.	1/6W 2.2k ohm	UJ
3020	J01225562	Carbon Film RES.	1/6W 5.6k ohm	PJ
3021	J02225223	Carbon Film RES.	1/6W 22k ohm	UJ
3022	J02225221	Carbon Film RES.	1/6W 220 ohm	UJ
3023	J01225560	Carbon Film RES.	1/6W 56 ohm	PJ
3024	J01225222	Carbon Film RES.	1/6W 2.2k ohm	PJ
3025	J02225560	Carbon Film RES.	1/6W 56 ohm	UJ
3026	J01225472	Carbon Film RES.	1/6W 4.7k ohm	PJ
3028	J02225472	Carbon Film RES.	1/6W 4.7k ohm	UJ
3029	J01225682	Carbon Film RES.	1/6W 6.8k ohm	PJ
3030	J02225332	Carbon Film RES.	1/6W 3.3k ohm	UJ
3031	J02225472	Carbon Film RES.	1/6W 4.7k ohm	UJ
3032	J02225473	Carbon Film RES.	1/6W 47k ohm	UJ
3033	J02225473	Carbon Film RES.	1/6W 47k ohm	UJ
3034	J01225471	Carbon Film RES.	1/6W 470 ohm	PJ
3035	J01225560	Carbon Film RES.	1/6W 56 ohm	PJ
3036	J02225222	Carbon Film RES.	1/6W 2.2k ohm	UJ
3037	J02225224	Carbon Film RES.	1/6W 220k ohm	PJ
3038	J02225222	Carbon Film RES.	1/6W 2.2k ohm	UJ
3039	J02225102	Carbon Film RES.	1/6W 1k ohm	UJ
3040	J02225153	Carbon Film RES.	1/6W 15k ohm	UJ
3041	J02225153	Carbon Film RES.	1/6W 15k ohm	UJ
3042	J01225101	Carbon Film RES.	1/6W 100 ohm	PJ
3043	J02225103	Carbon Film RES.	1/6W 10k ohm	UJ
3044	J01225102	Carbon Film RES.	1/6W 1k ohm	PJ
3045	J02225103	Carbon Film RES.	1/6W 10k ohm	UJ
3046	J02225101	Carbon Film RES.	1/6W 100 ohm	UJ
3051	J02225334	Carbon Film RES.	1/6W 330k ohm	UJ
3052	J01225104	Carbon Film RES.	1/6W 100k ohm	PJ
3053	J01225472	Carbon Film RES.	1/6W 4.7k ohm	PJ
3054	J02225224	Carbon Film RES.	1/6W 220k ohm	UJ
3055	J01225103	Carbon Film RES	1/6W 10k ohm	PJ
3056	J02225101	Carbon Film RES.	1/6W 100 ohm	UJ
3057	J02225224	Carbon Film RES.	1/6W 220k ohm	UJ
3058	J01225562	Carbon Film RES.	1/6W 5.6k ohm	PJ
3059	J01225102	Carbon Film RES.	1/6W 1k ohm	PJ
3060	J01225223	Carbon Film RES.	1/6W 22k ohm	PJ
R3061	J01225103	Carbon Film RES.	1/6W 10k ohm	PJ
R3062	J01225223	Carbon Film RES.	1/6W 22k ohm	PJ
R3063	J01225102	Carbon Film RES.	1/6W 1k ohm	PJ
R3064	J01225223	Carbon Film RES.	1/6W 22k ohm	PJ
R3065	J01225102	Carbon Film RES.	1/6W 1k ohm	PJ
R3066	J01225223	Carbon Film RES.	1/6W 22k ohm	PJ
R3067	J01225472	Carbon Film RES.	1/6W 4.7k ohm	PJ
R3068	J02225472	Carbon Film RES.	1/6W 4.7k ohm	UJ
R3069	J01225682	Carbon Film RES.	1/6W 6.8k ohm	PJ
R3070	J01225682	Carbon Film RES.	1/6W 6.8k ohm	PJ
R3071	J02225332	Carbon Film RES.	1/6W 3.3k ohm	UJ
R3072	J01225682	Carbon Film RES.	1/6W 6.8k ohm	PJ
R3073	J01225223	Carbon Film RES.	1/6W 22k ohm	PJ
R3074	J02225103	Carbon Film RES.	1/6W 10k ohm	UJ
R3075	J02225470	Carbon Film RES.	1/6W 47 ohm	UJ
R3076	J01225473	Carbon Film RES.	1/6W 47k ohm	PJ
R3077	J02225101	Carbon Film RES.	1/6W 100 ohm	UJ
R3078	J02225224	Carbon Film RES.	1/6W 220k ohm	UJ
R3079	J01225101	Carbon Film RES.	1/6W 100 ohm	PJ
R3080	J02225102	Carbon Film RES.	1/6W 1k ohm	UJ
R3082	J01225102	Carbon Film RES.	1/6W 1k ohm	PJ
R3084	J02225333	Carbon Film RES.	1/6W 33k ohm	UJ
R3085	J01225560	Carbon Film RES.	1/6W 56 ohm	PJ
R3086	J02225103	Carbon Film RES.	1/6W 10k ohm	UJ
R3087	J02225123	Carbon Film RES.	1/6W 12k ohm	UJ
R3088	J02225103	Carbon Film RES.	1/6W 10k ohm	UJ
R3089	J01225103	Carbon Film RES.	1/6W 10k ohm	PJ
R3091	J02225332	Carbon Film RES.	1/6W 3.3k ohm	UJ
R3092	J01225104	Carbon Film RES.	1/6W 100k ohm	PJ
R3093	J01225102	Carbon Film RES.	1/6W 1k ohm	PJ
R3094	J01225224	Carbon Film RES.	1/6W 220k ohm	PJ
R3095	J02225104	Carbon Film RES.	1/6W 100k ohm	UJ
R3096	J02225101	Carbon Film RES.	1/6W 100 ohm	UJ
R3097	J02225102	Carbon Film RES.	1/6W 1k ohm	UJ
R3099	J02225103	Carbon Film RES.	1/6W 10k ohm	UJ
R3100	J02225104	Carbon Film RES.	1/6W 100k ohm	UJ
R3101	J02225332	Carbon Film RES.	1/6W 3.3k ohm	UJ
R3102	J02225104	Carbon Film RES.	1/6W 100k ohm	UJ
R3103	J01225332	Carbon Film RES.	1/6W 3.3k ohm	PJ
R3105	J02225101	Carbon Film RES.	1/6W 100 ohm	UJ
R3108	J02225222	Carbon Film RES.	1/6W 2.2k ohm	UJ
R3109	J01225221	Carbon Film RES.	1/6W 220 ohm	PJ
R3110	J02225472	Carbon Film RES.	1/6W 4.7k ohm	UJ

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R3111	J02225102	Carbon Film RES.	1/6W 1k ohm	UJ
R3112	J02225334	Carbon Film RES.	1/6W 330k ohm	UJ
R3113	J02225104	Carbon Film RES.	1/6W 100k ohm	UJ
R3114	J02225473	Carbon Film RES.	1/6W 47k ohm	UJ
R3115	J02225222	Carbon Film RES.	1/6W 2.2k ohm	UJ
R3116	J01225223	Carbon Film RES.	1/6W 22k ohm	PJ
R3117	J02225334	Carbon Film RES.	1/6W 330k ohm	UJ
R3118	J01225152	Carbon Film RES.	1/6W 1.5k ohm	PJ
R3119	J02225560	Carbon Film RES.	1/6W 56 ohm	UJ
R3120	J02225474	Carbon Film RES.	1/6W 470k ohm	UJ
R3121	J02225152	Carbon Film RES.	1/6W 1.5k ohm	UJ
R3122	J02225222	Carbon Film RES.	1/6W 2.2k ohm	UJ
R3123	J02225474	Carbon Film RES.	1/6W 470k ohm	UJ
R3124	J02225104	Carbon Film RES.	1/6W 100k ohm	UJ
R3125	J01225103	Carbon Film RES.	1/6W 10k ohm	PJ
R3126	J02225472	Carbon Film RES.	1/6W 4.7k ohm	UJ
R3127	J02225104	Carbon Film RES.	1/6W 100k ohm	UJ
R3128	J02225473	Carbon Film RES.	1/6W 47k ohm	UJ
R3129	J02225334	Carbon Film RES.	1/6W 330k ohm	UJ
R3131	J01225272	Carbon Film RES.	1/6W 2.7k ohm	PJ
R3132	J01225223	Carbon Film RES.	1/6W 22k ohm	PJ
R3133	J02225334	Carbon Film RES.	1/6W 330k ohm	UJ
R3134	J02225152	Carbon Film RES.	1/6W 1.5k ohm	UJ
R3135	J01225560	Carbon Film RES.	1/6W 56 ohm	PJ
R3136	J02225224	Carbon Film RES.	1/6W 220k ohm	UJ
R3137	J02225222	Carbon Film RES.	1/6W 2.2k ohm	UJ
R3138	J02225101	Carbon Film RES.	1/6W 100 ohm	UJ
R3139	J02225103	Carbon Film RES.	1/6W 10k ohm	UJ
R3140	J02225335	Carbon Film RES.	1/6W 3.3M ohm	UJ
R3141	J02225472	Carbon Film RES.	1/6W 4.7k ohm	UJ
R3142	J02225102	Carbon Film RES.	1/6W 1k ohm	UJ
R3143	J01225153	Carbon Film RES.	1/6W 15k ohm	PJ
R3144	J02225222	Carbon Film RES.	1/6W 2.2k ohm	UJ
R3145	J02225560	Carbon Film RES.	1/6W 56 ohm	UJ
R3146	J02225223	Carbon Film RES.	1/6W 22k ohm	UJ
R3147	J01225223	Carbon Film RES.	1/6W 22k ohm	PJ
R3148	J01225223	Carbon Film RES.	1/6W 22k ohm	PJ
R3149	J01225560	Carbon Film RES.	1/6W 56 ohm	PJ
R3151	J02225471	Carbon Film RES.	1/6W 470 ohm	UJ
R3152	J02225473	Carbon Film RES.	1/6W 47k ohm	UJ
R3154	J02225104	Carbon Film RES.	1/6W 100k ohm	UJ
R3155	J02225104	Carbon Film RES.	1/6W 100k ohm	UJ
R3156	J02225472	Carbon Film RES.	1/6W 4.7k ohm	UJ

R3157	J02225223	Carbon Film RES.	1/6W	22k ohm	
R3159	J01225333	Carbon Film RES.	1/6W	33k ohm	
R3160	J01225222	Carbon Film RES.	1/6W	2.2k ohm	
R3161	J01225221	Carbon Film RES.	1/6W	220 ohm	
R3162	J02225331	Carbon Film RES.	1/6W	330 ohm	
R3163	J01225223	Carbon Film RES.	1/6W	22k ohm	
R3164	J01225223	Carbon Film RES.	1/6W	22k ohm	
R3168	J02225104	Carbon Film RES.	1/6W	100k ohm	
R3169	J02225473	Carbon Film RES.	1/6W	47k ohm	
R3170	J01225101	Carbon Film RES.	1/6W	100 ohm	
R3172	J01225153	Carbon Film RES.	1/6W	15k ohm	
R3173	J01225102	Carbon Film RES.	1/6W	1k ohm	
R3174	J24205561	RES. Chip	1/10W	560 ohm	
R3175	J24205223	RES. Chip	1/10W	22k ohm	
R3176	J02225472	Carbon Film RES.	1/6W	4.7k ohm	
R3177	J01225222	Carbon Film RES.	1/6W	2.2k ohm	
VR3001	J51745472	POT.	B	4.7k ohm	
VR3002	J51745104	POT.	B	100k ohm	
VR3003	J51745103	POT.	B	10k ohm	
VR3004	J51745103	POT.	B	10k ohm	
VR3005	J51745103	POT.	B	10k ohm	
VR3006	J51745473	POT.	B	47k ohm	
VR3007	J51745103	POT.	B	10k ohm	
VR3008	J51745102	POT.	B	1k ohm	
VR3009	J51745223	POT.	B	22k ohm	
VR3010	J51745104	POT.	B	100k ohm	
VR3011	J51745103	POT.	B	10k ohm	
VR3012	J51745102	POT.	B	1k ohm	
C3001	K13179008	Ceramic CAP.	F	50WV	0.01u
C3002	K40109001	AL. Electro. CAP.		10WV	100u
C3003	K05175151	Ceramic CAP.	RH	50WV	150p
C3004	K05175151	Ceramic CAP.	RH	50WV	150p
C3005	K05175220	Ceramic CAP.	RH	50WV	22p
C3006	K05173100	Ceramic CAP.	RH	50WV	10p
C3007	K13179008	Ceramic CAP.	F	50WV	0.01u
C3008	K00175150	Ceramic CAP.	SL	50WV	15p
C3009	K13179008	Ceramic CAP.	F	50WV	0.01u
C3010	K00175180	Ceramic CAP.	SL	50WV	18p
C3011	K13179010	Ceramic CAP.	F	50WV	0.022u
C3012	K13179008	Ceramic CAP.	F	50WV	0.01u
C3013	K13179010	Ceramic CAP.	F	50WV	0.022u
C3014	K12171102	Ceramic CAP.	E	50WV	0.001u
C3015	K05173080	Ceramic CAP.	RH	50WV	8p
C3016	K13179008	Ceramic CAP.	F	50WV	0.01u
C3018	K12171102	Ceramic CAP.	E	50WV	0.001u
C3019	K05175151	Ceramic CAP.	RH	50WV	150p
C3020	K13179008	Ceramic CAP.	F	50WV	0.01u
C3021	K05172050	Ceramic CAP.	RH	50WV	5p
C3022	K05175151	Ceramic CAP.	RH	50WV	150p
C3023	K13179010	Ceramic CAP.	F	50WV	0.022u
C3024	K13179010	Ceramic CAP.	F	50WV	0.022u
C3025	K00172040	Ceramic CAP.	SL	50WV	4p
C3026	K12171102	Ceramic CAP.	E	50WV	0.001u
C3027	K00173090	Ceramic CAP.	SL	50WV	9p
C3028	K13179010	Ceramic CAP.	F	50WV	0.022u
C3029	K40129004	AL. Electro. CAP.		16WV	10u
C3030	K13179008	Ceramic CAP.	F	50WV	0.01u
C3031	K13179008	Ceramic CAP.	F	50WV	0.01u
C3032	K13179008	Ceramic CAP.	F	50WV	0.01u
C3033	K13179008	Ceramic CAP.	F	50WV	0.01u
C3034	K40129004	AL. Electro. CAP.		16WV	10u
C3035	K00173070	Ceramic CAP.	SL	50WV	7p
C3036	K00173070	Ceramic CAP.	SL	50WV	7p
C3037	K13179008	Ceramic CAP.	F	50WV	0.01u
C3038	K19149021	Ceramic CAP.		25WV	0.047u
C3039	K12171102	Ceramic CAP.	E	50WV	0.001u
C3040	K13179010	Ceramic CAP.	F	50WV	0.022u
C3041	K13179010	Ceramic CAP.	F	50WV	0.022u

3042	K13179010	Ceramic CAP.	F	50WV	0.022uF
3044	K13179010	Ceramic CAP.	F	50WV	0.022uF
3047	K00173100	Ceramic CAP.	SL	50WV	10pF
3048	K00175331	Ceramic CAP.	SL	50WV	330pF
3049	K12171102	Ceramic CAP.	F	50WV	0.001uF
3050	K12171102	Ceramic CAP.	F	50WV	0.001uF
3051	K13179010	Ceramic CAP.	F	50WV	0.022uF
3052	K40179013	AL. Electro. CAP.		50WV	1uF
3053	K13179008	Ceramic CAP.	F	50WV	0.01uF
3054	K19149025	Ceramic CAP.		25WV	0.1uF
3055	K19149025	Ceramic CAP.		25WV	0.1uF
3056	K19149025	Ceramic CAP.		25WV	0.1uF
3057	K19149025	Ceramic CAP.		25WV	0.1uF
3058	K19149025	Ceramic CAP.		25WV	0.1uF
3059	K19149025	Ceramic CAP.		25WV	0.1uF
3060	K19149025	Ceramic CAP.		25WV	0.1uF
3061	K19149025	Ceramic CAP.		25WV	0.1uF
3062	K19149013	Ceramic CAP.		25WV	0.01uF
3063	K19149013	Ceramic CAP.		25WV	0.01uF
3064	K12171102	Ceramic CAP.	E	50WV	0.001uF
3065	K13179008	Ceramic CAP.	F	50WV	0.01uF
3066	K19149021	Ceramic CAP.		25WV	0.047uF
3067	K12171102	Ceramic CAP.	E	50WV	0.001uF
3068	K19149022	Ceramic CAP.		25WV	0.047uF
3069	K70107106	Tantalum CAP.		10WV	10uF
3070	K19149021	Ceramic CAP.		25WV	0.047uF
3072	K13179008	Ceramic CAP.	F	50WV	0.01uF
3073	K19149021	Ceramic CAP.		25WV	0.047uF
3074	K19149021	Ceramic CAP.		25WV	0.047uF
3075	K19149021	Ceramic CAP.		25WV	0.047uF
3076	K19149021	Ceramic CAP.		25WV	0.047uF
3077	K19149013	Ceramic CAP.		25WV	0.01uF
3080	K40129004	AL. Electro. CAP.		16WV	10uF
3081	K13179008	Ceramic CAP.	F	50WV	0.01uF
3082	K19149013	Ceramic CAP.		25WV	0.01uF
3083	K12171102	Ceramic CAP.	E	50WV	0.001uF
3084	K40179016	AL. Electro. CAP.		50WV	0.1uF
3085	K19149025	Ceramic CAP.		25WV	0.1uF
3087	K19149021	Ceramic CAP.		25WV	0.047uF
3089	K19149017	Ceramic CAP.		25WV	0.022uF
3090	K40179013	AL. Electro. CAP.		50WV	1uF
3091	K19149021	Ceramic CAP.		25WV	0.047uF
3093	K19149009	Ceramic CAP.		25WV	0.0047uF
3094	K19149009	Ceramic CAP.		25WV	0.0047uF
3095	K10179024	Ceramic CAP.	B	50WV	0.01uF
3096	K12171102	Ceramic CAP.	E	50WV	0.001uF
3097	K19149021	Ceramic CAP.		25WV	0.047uF
3098	K00175101	Ceramic CAP.	SL	50WV	100pF
3099	K40179013	AL. Electro. CAP.		50WV	1uF
3100	K19149021	Ceramic CAP.		25WV	0.047uF
3101	K40179013	AL. Electro. CAP.		50WV	1uF
3103	K19149025	Ceramic CAP.		25WV	0.1uF
3104	K40109001	AL. Electro. CAP.		10WV	100uF
3105	K40179016	AL. Electro. CAP.		50WV	0.1uF
3106	K19149021	Ceramic CAP.		25WV	0.047uF
3110	K19149021	Ceramic CAP.		25WV	0.047uF
3111	K00173100	Ceramic CAP.	SL	50WV	10pF
3112	K19149021	Ceramic CAP.		25WV	0.047uF
3113	K19149021	Ceramic CAP.		25WV	0.047uF
3114	K19149021	Ceramic CAP.		25WV	0.047uF
3115	K13179008	Ceramic CAP.	F	50WV	0.01uF
3116	K40179004	AL. Electro. CAP.		16WV	10uF
3117	K19149021	Ceramic CAP.		25WV	0.047uF
3118	K00175270	Ceramic CAP.	SL	50WV	27pF
3119	K51176102	Styrol CAP.		50WV	0.001uF
3120	K51176102	Styrol CAP.		50WV	0.001uF
3121	K00175101	Ceramic CAP.	SL	50WV	100pF
3122	K13179008	Ceramic CAP.	F	50WV	0.01uF
3123	K13179008	Ceramic CAP.	F	50WV	0.01uF
3124	K19149013	Ceramic CAP.		25WV	0.01uF
3125	K00173100	Ceramic CAP.	SL	50WV	10pF
3126	K19149021	Ceramic CAP.		25WV	0.047uF
3127	K00175101	Ceramic CAP.	SL	50WV	100pF
3128	K19149021	Ceramic CAP.		25WV	0.047uF
3129	K13179008	Ceramic CAP.	F	50WV	0.01uF
3130	K19149021	Ceramic CAP.		25WV	0.047uF
3131	K19149021	Ceramic CAP.		25WV	0.047uF
3032	K70147155	Tantalum CAP.		25WV	1.5uF

C3133	K70107106	Tantalum CAP.		10WV	10uF
C3134	K40109001	AL. Electro. CAP.		10WV	100uF
C3135	K19149021	Ceramic CAP.		25WV	0.047uF
C3136	K13179010	Ceramic CAP.	F	50WV	0.022uF
C3137	K40129004	AL. Electro. CAP.		16WV	10uF
C3138	K12171102	Ceramic CAP.	E	50WV	0.001uF
C3139	K40179013	AL. Electro. CAP.		50WV	1uF
C3140	K13179008	Ceramic CAP.	F	50WV	0.01uF
C3141	K13179010	Ceramic CAP.	F	50WV	0.022uF
C3142	K12171102	Ceramic CAP.	E	50WV	0.001uF
C3144	K40129004	AL. Electro. CAP.		16WV	10uF
C3145	K70147105	Tantalum CAP.		25WV	1uF
C3147	K12171102	Ceramic CAP.	E	50WV	0.001uF
C3150	K70107106	Tantalum CAP.		10WV	10uF
C3152	K40179016	AL. Electro. CAP.		50WV	0.1uF
C3153	K40129004	AL. Electro. CAP.		16WV	10uF
C3154	K40179013	AL. Electro. CAP.		50WV	1uF
C3156	K13179008	Ceramic CAP.	F	50WV	0.01uF
C3157	K13179008	Ceramic CAP.	F	50WV	0.01uF
C3158	K00175101	Ceramic CAP.	SL	50WV	100pF
C3159	K00175331	Ceramic CAP.	SL	50WV	330pF
C3160	K00175101	Ceramic CAP.	SL	50WV	100pF
C3161	K40149001	AL. Electro. CAP.		25WV	4.7uF
C3162	K70107226	Tantalum CAP.		10WV	22uF
C3163	K13179008	Ceramic CAP.	F	50WV	0.01uF
C3164	K40179013	AL. Electro. CAP.		50WV	1uF
C3166	K12171102	Ceramic CAP.	E	50WV	0.001uF
C3167	K19149009	Ceramic CAP.		25WV	0.0047uF
C3168	K19149021	Ceramic CAP.		25WV	0.0047uF
T3001	L0021533	Coil			
T3002	L0021735	Coil			
T3003	L0021735	Coil			
T3004	L0021736	Coil			
T3005	L0021737	Coil			
T3006	L0021736	Coil			
T3007	L0021736	Coil			
T3009	L0190002	Coil			
T3010	L0021469	Coil			
T3011	L0190002	Coil			
T3012	L0190094	Coil			
T3013	L0190094	Coil			
T3014	L0190094	Coil			
L3001	L0021257	Coil			
L3002	L0021257	Coil			
L3003	L1190270	M.RFC	100uH		
L3004	L1190270	M.RFC	100uH		
L3005	L1190189	M.RFC	1mH		
L3006	L1190189	M.RFC	1mH		
L3007	L1190189	M.RFC	1mH		
L3008	L1190189	M.RFC	1mH		
L3009	L1190040	M.RFC	1mH		
L3010	L1190040	M.RFC	1mH		
L3011	L0021610	Coil	250uH		
L3012	L1190189	M.RFC	1mH		
L3013	L1190266	M.RFC	47uH		
L3014	L1190189	M.RFC	1mH		
L3015	L1190189	M.RFC	1mH		
J3001	P0090524	Connector			
J3002	P0090525	Connector			
J3003	P0090525	Connector			
J3004	P0090525	Connector			
J3005	P0090526	Connector			
J3006	P0090525	Connector			
J3007	P0090525	Connector			
J3008	P0090525	Connector			
J3009	P0090528	Connector			
J3010	P0090524	Connector			
J3011	P0090525	Connector			
J3012	P0090527	Connector			
J3013	P0090527	Connector			
J3014	P0090524	Connector			
J3015	P0090528	Connector			
J3016	P0090524	Connector			
J3017	P0090554	Connector (CAT)			
J3018	P0090553	Connector (STBY)			

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J3019	P1090565	Connector (KEY)	
J3020	P1090350	Connector (EXT SPKR)	
J3021	P1090296	Connector (PTT)	
J3022	P1090546	Connector (DATA IN/OUT)	
J3023	P0090352	Connector	
	R0121120	Shield Case	
	R0121130	Shield Cover	
	R0121140A	Shield Plate	
	R0125620	Holder	

AF LPF UNIT

Symbol No.	Part No.	Description	Device
	F2892101	Printed Circuit Board	
	C028921AA	PCB with Components	
Q9001	G3327127G	Transistor	2SC2712GR-TE85R
Q9002	G3070007	Transistor	FA1F4N-T2B
Q9003	G3327127G	Transistor	2SC2712GR-TE85R
Q9004	G3070007	Transistor	FA1F4N-T2B
Q9005	G3327127G	Transistor	2SC2712GR-TE85R
R9001	J24205104	RES. Chip.	1/10W 100k ohm
R9002	J24205334	RES. Chip.	1/10W 330k ohm
R9003	J24205101	RES. Chip.	1/10W 100 ohm
R9004	J24205472	RES. Chip.	1/10W 4.7k ohm
R9005	J24205104	RES. Chip.	1/10W 100k ohm
R9006	J24205104	RES. Chip.	1/10W 100k ohm
R9007	J24205103	RES. Chip.	1/10W 10k ohm
R9008	J24205103	RES. Chip.	1/10W 10k ohm
R9009	J24205472	RES. Chip.	1/10W 4.7k ohm
R9010	J24205472	RES. Chip.	1/10W 4.7k ohm
R9011	J24205101	RES. Chip.	1/10W 100 ohm
R9012	J24205102	RES. Chip.	1/10W 1k ohm
R9013	J24205472	RES. Chip.	1/10W 4.7k ohm
C9001	K22141809	CAP. Chip.	25WV 0.1uF
C9002	K22170817	CAP. Chip.	B 50WV 0.01uF
C9003	K22170809	CAP. Chip.	B 50WV 0.0022uF
C9004	K22141809	CAP. Chip.	B 25WV 0.1uF
C9005	K22170805	CAP. Chip.	B 50WV 0.001uF
C9006	K22141809	CAP. Chip.	25WV 0.1uF
C9007	K78120009	Tantalum CAP. Chip.	16WV 1uF
	Q5000057	Lead Frame	

FM SCAN UNIT

Symbol No.	Part No.	Description	Device
	F2892103	Printed Circuit Board	
	C028923AA	PCB with Components	
Q9401	G1090559	IC	LA6324M
Q9402	G3070001	Transistor	FA1A4M
Q9403	G3070001	Transistor	FA1A4M
D9401	G2070009	Diode	1SS184 TE85R
R9401	J24205334	RES. Chip.	1/10W 330k ohm
R9402	J24205473	RES. Chip.	1/10W 47k ohm
R9403	J24205473	RES. Chip.	1/10W 47k ohm
R9404	J24205105	RES. Chip.	1/10W 1M ohm
R9405	J24205104	RES. Chip.	1/10W 100k ohm
R9406	J24205473	RES. Chip.	1/10W 47k ohm
R9407	J24205472	RES. Chip.	1/10W 4.7k ohm
R9408	J24205472	RES. Chip.	1/10W 4.7k ohm
R9409	J24205223	RES. Chip.	1/10W 22k ohm
R9411	J24205000	RES. Chip.	1/10W 0 ohm
C9401	K22171004	CAP. Chip.	F 50WV 0.01uF
	Q5000057	Lead Frame	

SSB SCAN UNIT

Symbol No.	Part No.	Description	Device
	F2892106	Printed Circuit Board	
	C028926AA	PCB with Components	
Q9301	G1090559	IC	LA6324M
D9301	G2070009	Diode	1SS184 TE85R
D9302	G2070003	Diode	1SS226 TE85R
R9301	J24205474	RES. Chip.	1/10W 470k ohm
R9302	J24205103	RES. Chip.	1/10W 10k ohm
R9303	J24205153	RES. Chip.	1/10W 15k ohm
R9304	J24205153	RES. Chip.	1/10W 15k ohm
R9305	J24205223	RES. Chip.	1/10W 22k ohm
R9306	J24205104	RES. Chip.	1/10W 100k ohm
R9307	J24205104	RES. Chip.	1/10W 100k ohm
R9308	J24205105	RES. Chip.	1/10W 1M ohm
R9309	J24205473	RES. Chip.	1/10W 47k ohm
R9310	J24205103	RES. Chip.	1/10W 10k ohm
R9311	J24205124	RES. Chip.	1/10W 120k ohm
	Q5000057	Lead Frame	

13MHz RX PLL UNIT

Symbol No.	Part No.	Description	Device
	F2892109A	Printed Circuit Board	
	C028929AA	PCB with Components	
Q9801	G1090739	IC	MC145163SL
Q9802	G3326197B	Transistor	2SC2619FBTR
Q9803	G3326197B	Transistor	2SC2619FBTR
R9801	J24205102	RES. Chip.	1/10W 1k ohm
R9802	J24205332	RES. Chip.	1/10W 3.3k ohm
R9803	J24205104	RES. Chip.	1/10W 100k ohm
R9804	J24205102	RES. Chip.	1/10W 1k ohm
R9805	J24205472	RES. Chip.	1/10W 4.7k ohm
R9806	J24205103	RES. Chip.	1/10W 10k ohm
R9807	J24205102	RES. Chip.	1/10W 1k ohm
R9808	J24205104	RES. Chip.	1/10W 100k ohm
C9801	K22170817	CAP. Chip.	B 50WV 0.01u
C9802	K22170817	CAP. Chip.	B 50WV 0.01u
C9803	K22170817	CAP. Chip.	B 50WV 0.01u
C9804	K22170206	CAP. Chip.	CH 50WV 5p
C9805	K22170817	CAP. Chip.	B 50WV 0.01u
C9806	K22170817	CAP. Chip.	B 50WV 0.01u
	Q5000057	Lead Frame	

TX UNIT

Symbol No.	Part No.	Description	Device
	F2887102A	Printed Circuit Board	
	C028872AA	PCB with Components w/o VOX AMP UNIT, 13MHz-TX-PLL UNIT	
	C028872AB	PCB with Components w/VOX AMP UNIT, 13MHz-TX-PLL UNIT	
Q4001	G3305350B	Transistor	2SC535B
Q4002	G3318150G	Transistor	2SC1815GR
Q4003	G1090646	IC	LA6324
Q4004	G3090079	Transistor	BA1A4P
Q4005	G3090077	Transistor	BA1L3Z
Q4006	G3304580C	Transistor	2SC458C
Q4007	G3304580C	Transistor	2SC458C
Q4008	G3090079	Transistor	BA1A4P
Q4009	G3304600B	Transistor	2SC460B
Q4010	G4800740L	FET	3SK74L
Q4011	G1090606	IC	LA6358
Q4013	G3304600B	Transistor	2SC460B
Q4014	G3304600B	Transistor	2SC460B
G4015	G1090101	IC	uPC1037H
G4016	G1090101	IC	uPC1037H
Q4017	G3304600B	Transistor	2SC460B
Q4018	G3304580C	Transistor	2SC458C

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019	G3304600B	Transistor	2SC460B	
020	G1090101	IC	uPC1037H	
021	G3304600B	Transistor	2SC460B	
022	G4800740L	FET	3SK74L	
023	G3304580C	Transistor	2SC458C	
024	G3801921G	FET	2SK192AGR	
025	G3107331Q	Transistor	2SA733AQ	
026	G1090278	IC	uPD4001BC	
027	G1090282	IC	uPD4011BC	
028	G3090074	Transistor	BA1A4M	
029	G3090075	Transistor	BN1A4P	
030	G3115280	Transistor	2SA1528	
031	G3090075	Transistor	BN1A4P	
032	G3304580C	Transistor	2SC458C	
033	G3115280	Transistor	2SA1528	
034	G3304580C	Transistor	2SC458C	
035	G3115280	Transistor	2SA1528	
036	G3304600B	Transistor	2SC460B	
037	G3304580C	Transistor	2SC458C	
038	G3090080	Transistor	BA1L4M	
039	G3090080	Transistor	BA1L4M	
040	G3090079	Transistor	BA1A4P	
001	G2022080	Diode	1S2208	
002	G2022080	Diode	1S2208	
003	G2090408	Diode	1SS270	
004	G2090408	Diode	1SS270	
005	G2090382	Diode	MC931	
006	G2090408	Diode	1SS270	
007	G2090408	Diode	1SS270	
008	G2090408	Diode	1SS270	
009	G2090027	Diode	1SS53	
010	G2090027	Diode	1SS53	
011	G2015880	Diode	1S1588	
012	G2015880	Diode	1S1588	
013	G2090381	Diode	MC921	
014	G2090408	Diode	1SS270	
015	G2090200	Diode	1SV80	
016	G9090007	Varistor	MV-12	
017	G2090408	Diode	1SS270	
018	G2090408	Diode	1SS270	
019	G2090408	Diode	1SS270	
020	G2090383	Diode	MC911	
022	G2090408	Diode	1SS270	
023	G2090408	Diode	1SS270	
H4002	G9090001	Thermistor		
4001	H0102815	XTAL	HC-49/T 24.4885MHz	
4002	H9500100	XTAL OSC	GFS-203H 20.48MHz	
F4001	H1102123	XTAL Filter	XF-10.7N-252-01	
F4002	H1102123	XTAL Filter	XF-10.7N-252-01	
F4003	H1102120	XTAL Filter	13N15A	
F4001	H3900393	Ceramic Filter	SFE10.7MS2-A	
4001	J01225104	Carbon Film RES.	1/6W 100k ohm	PJ
4002	J02225103	Carbon Film RES.	1/6W 10k ohm	UJ
4003	J02225101	Carbon Film RES.	1/6W 100 ohm	UJ
4004	J02225333	Carbon Film RES.	1/6W 33k ohm	UJ
4005	J02225473	Carbon Film RES.	1/6W 47k ohm	UJ
4006	J01225223	Carbon Film RES.	1/6W 22k ohm	PJ
4007	J02225102	Carbon Film RES.	1/6W 1k ohm	UJ
4008	J02225223	Carbon Film RES.	1/6W 22k ohm	UJ
4009	J02225101	Carbon Film RES.	1/6W 100 ohm	UJ
4010	J02225102	Carbon Film RES.	1/6W 1k ohm	UJ
4011	J02225154	Carbon Film RES.	1/6W 150k ohm	UJ
4012	J02225221	Carbon Film RES.	1/6W 220 ohm	UJ
4013	J02225334	Carbon Film RES.	1/6W 330k ohm	UJ
4014	J02225103	Carbon Film RES.	1/6W 10k ohm	UJ
4015	J02225101	Carbon Film RES.	1/6W 100 ohm	UJ
4016	J02225472	Carbon Film RES.	1/6W 4.7k ohm	UJ
4017	J02225474	Carbon Film RES.	1/6W 470k ohm	UJ
4018	J02225473	Carbon Film RES.	1/6W 47k ohm	UJ
4019	J02225682	Carbon Film RES.	1/6W 6.8k ohm	UJ
4020	J02225684	Carbon Film RES.	1/6W 680k ohm	UJ
4021	J02225682	Carbon Film RES.	1/6W 6.8k ohm	UJ
4022	J02225473	Carbon Film RES.	1/6W 47k ohm	UJ
4023	J02225103	Carbon Film RES.	1/6W 10k ohm	UJ
4024	J02225513	Carbon Film RES.	1/6W 51k ohm	UJ
4025	J02225513	Carbon Film RES.	1/6W 51k ohm	UJ
4026	J02225225	Carbon Film RES.	1/6W 2.2M ohm	UJ
4027	J02225183	Carbon Film RES.	1/6W 18k ohm	UJ
4028	J01225183	Carbon Film RES.	1/6W 18k ohm	PJ
4029	J01225225	Carbon Film RES.	1/6W 2.2M ohm	PJ
4030	J01225472	Carbon Film RES.	1/6W 4.7k ohm	PJ
R4031	J02225332	Carbon Film RES.	1/6W 3.3k ohm	UJ
R4032	J02225103	Carbon Film RES.	1/6W 10k ohm	UJ
R4033	J01225153	Carbon Film RES.	1/6W 15k ohm	PJ
R4034	J01225103	Carbon Film RES.	1/6W 10k ohm	PJ
R4035	J01225104	Carbon Film RES.	1/6W 100k ohm	PJ
R4036	J01225101	Carbon Film RES.	1/6W 100 ohm	PJ
R4037	J02225224	Carbon Film RES.	1/6W 220k ohm	UJ
R4038	J02225222	Carbon Film RES.	1/6W 2.2k ohm	UJ
R4039	J01225221	Carbon Film RES.	1/6W 220 ohm	PJ
R4040	J02225474	Carbon Film RES.	1/6W 470k ohm	UJ
R4041	J02225102	Carbon Film RES.	1/6W 1k ohm	UJ
R4042	J02225104	Carbon Film RES.	1/6W 100k ohm	UJ
R4043	J02225332	Carbon Film RES.	1/6W 3.3k ohm	UJ
R4044	J02225273	Carbon Film RES.	1/6W 27k ohm	UJ
R4045	J01225104	Carbon Film RES.	1/6W 100k ohm	PJ
R4046	J02225223	Carbon Film RES.	1/6W 22k ohm	UJ
R4047	J02225223	Carbon Film RES.	1/6W 22k ohm	UJ
R4048	J02225103	Carbon Film RES.	1/6W 10k ohm	UJ
R4049	J02225101	Carbon Film RES.	1/6W 100 ohm	UJ
R4050	J01225223	Carbon Film RES.	1/6W 22k ohm	PJ
R4051	J01225474	Carbon Film RES.	1/6W 470k ohm	PJ
R4052	J02225223	Carbon Film RES.	1/6W 22k ohm	UJ
R4053	J01225223	Carbon Film RES.	1/6W 22k ohm	PJ
R4054	J02225223	Carbon Film RES.	1/6W 22k ohm	UJ
R4055	J02225225	Carbon Film RES.	1/6W 2.2M ohm	UJ
R4056	J02225472	Carbon Film RES.	1/6W 4.7k ohm	UJ
R4057	J02225332	Carbon Film RES.	1/6W 3.3k ohm	UJ
R4058	J02225102	Carbon Film RES.	1/6W 1k ohm	UJ
R4062	J02225562	Carbon Film RES.	1/6W 5.6k ohm	UJ
R4063	J02225562	Carbon Film RES.	1/6W 5.6k ohm	UJ
R4064	J02225562	Carbon Film RES.	1/6W 5.6k ohm	UJ
R4065	J01225223	Carbon Film RES.	1/6W 22k ohm	PJ
R4066	J02225223	Carbon Film RES.	1/6W 22k ohm	UJ
R4067	J01225560	Carbon Film RES.	1/6W 56 ohm	PJ
R4068	J02225102	Carbon Film RES.	1/6W 1k ohm	UJ
R4069	J02225102	Carbon Film RES.	1/6W 1k ohm	UJ
R4070	J01225104	Carbon Film RES.	1/6W 100k ohm	PJ
R4071	J02225332	Carbon Film RES.	1/6W 3.3k ohm	UJ
R4072	J02225560	Carbon Film RES.	1/6W 56 ohm	UJ
R4073	J01225560	Carbon Film RES.	1/6W 56 ohm	PJ
R4074	J01225473	Carbon Film RES.	1/6W 47k ohm	PJ
R4075	J02225473	Carbon Film RES.	1/6W 47k ohm	UJ
R4076	J02225104	Carbon Film RES.	1/6W 100k ohm	UJ
R4077	J02225471	Carbon Film RES.	1/6W 470 ohm	UJ
R4078	J02225221	Carbon Film RES.	1/6W 220 ohm	UJ
R4079	J02225681	Carbon Film RES.	1/6W 680 ohm	UJ
R4080	J02225224	Carbon Film RES.	1/6W 220k ohm	UJ
R4081	J02225102	Carbon Film RES.	1/6W 1k ohm	UJ
R4082	J02225330	Carbon Film RES.	1/6W 33 ohm	UJ
R4083	J02225103	Carbon Film RES.	1/6W 10k ohm	UJ
R4084	J02225472	Carbon Film RES.	1/6W 4.7k ohm	UJ
R4085	J02225102	Carbon Film RES.	1/6W 1k ohm	UJ
R4086	J02225102	Carbon Film RES.	1/6W 1k ohm	UJ
R4087	J02225103	Carbon Film RES.	1/6W 10k ohm	UJ
R4088	J02225102	Carbon Film RES.	1/6W 1k ohm	UJ
R4089	J02225101	Carbon Film RES.	1/6W 100 ohm	UJ
R4090	J02225560	Carbon Film RES.	1/6W 56 ohm	UJ
R4091	J02225274	Carbon Film RES.	1/6W 270k ohm	UJ
R4092	J02225152	Carbon Film RES.	1/6W 1.5k ohm	UJ
R4093	J02225272	Carbon Film RES.	1/6W 2.7k ohm	UJ
R4094	J02225272	Carbon Film RES.	1/6W 2.7k ohm	UJ
R4095	J01225223	Carbon Film RES.	1/6W 22k ohm	PJ
R4096	J01225104	Carbon Film RES.	1/6W 100k ohm	PJ
R4100	J01225153	Carbon Film RES.	1/6W 15k ohm	PJ
R4101	J01225331	Carbon Film RES.	1/6W 330 ohm	PJ
R4102	J02225222	Carbon Film RES.	1/6W 2.2k ohm	UJ
R4103	J01225332	Carbon Film RES.	1/6W 3.3k ohm	PJ
R4104	J02225105	Carbon Film RES.	1/6W 1M ohm	UJ
R4105	J02225103	Carbon Film RES.	1/6W 10k ohm	UJ
R4106	J01225155	Carbon Film RES.	1/6W 1.5M ohm	PJ
R4107	J02225183	Carbon Film RES.	1/6W 18k ohm	UJ
R4109	J02225102	Carbon Film RES.	1/6W 1k ohm	UJ
R4110	J02225334	Carbon Film RES.	1/6W 330k ohm	UJ
R4111	J02225223	Carbon Film RES.	1/6W 22k ohm	UJ
R4112	J01225334	Carbon Film RES.	1/6W 330k ohm	PJ
R4113	J01225155	Carbon Film RES.	1/6W 1.5M ohm	PJ
R4114	J02225274	Carbon Film RES.	1/6W 270k ohm	UJ
R4115	J02225473	Carbon Film RES.	1/6W 47k ohm	UJ
R4116	J02225155	Carbon Film RES.	1/6W 1.5M ohm	UJ
R4117	J02225134	Carbon Film RES.	1/6W 130k ohm	UJ
R4118	J02225333	Carbon Film RES.	1/6W 33k ohm	UJ
R4120	J02225332	Carbon Film RES.	1/6W 3.3k ohm	UJ
R4121	J02225473	Carbon Film RES.	1/6W 47k ohm	UJ
R4124	J02225103	Carbon Film RES.	1/6W 10k ohm	UJ
R4125	J02225472	Carbon Film RES.	1/6W 4.7k ohm	UJ
R4126	J02225472	Carbon Film RES.	1/6W 4.7k ohm	UJ
R4127	J01225472	Carbon Film RES.	1/6W 4.7k ohm	PJ

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R4128	J02225103	Carbon Film RES.	1/6W	10k ohm	UJ
R4129	J01225471	Carbon Film RES.	1/6W	470 ohm	PJ
R4130	J01225470	Carbon Film RES.	1/6W	47 ohm	PJ
R4131	J02225223	Carbon Film RES.	1/6W	22k ohm	UJ
R4132	J02225222	Carbon Film RES.	1/6W	2.2k ohm	UJ
R4133	J02225222	Carbon Film RES.	1/6W	2.2k ohm	UJ
R4136	J02225221	Carbon Film RES.	1/6W	220 ohm	UJ
R4137	J02225472	Carbon Film RES.	1/6W	4.7k ohm	UJ
R4138	J02225683	Carbon Film RES.	1/6W	68k ohm	UJ
R4139	J02225682	Carbon Film RES.	1/6W	6.8k ohm	UJ
R4140	J02225471	Carbon Film RES.	1/6W	470 ohm	UJ
R4141	J01225223	Carbon Film RES.	1/6W	22k ohm	PJ
R4142	J01225102	Carbon Film RES.	1/6W	1k ohm	PJ
R4143	J01225471	Carbon Film RES.	1/6W	470 ohm	PJ
R4144	J01225471	Carbon Film RES.	1/6W	470 ohm	PJ
R4145	J01225100	Carbon Film RES.	1/6W	10 ohm	PJ
VR4001	J51745473	POT.	B	47k ohm	
VR4003	J51745104	POT.	B	100k ohm	
VR4004	J51745103	POT.	B	10k ohm	
C4001	K19149013	Ceramic CAP.		25WV	0.01uF
C4002	K05173100	Ceramic CAP.	RH	50WV	10pF
C4003	K02172040	Ceramic CAP.	CH	50WV	4pF
C4004	K40109001	AL. Electro. CAP.		10WV	100uF
C4005	K02175101	Ceramic CAP.	CH	50WV	100pF
C4006	K05175220	Ceramic CAP.	RH	50WV	22pF
C4007	K05175151	Ceramic CAP.	RH	50WV	150pF
C4008	K05175151	Ceramic CAP.	RH	50WV	150pF
C4009	K40109001	AL. Electro. CAP.		10WV	100uF
C4010	K13179010	Ceramic CAP.	F	50WV	0.022uF
C4012	K40109001	AL. Electro. CAP.		10WV	100uF
C4013	K12171102	Ceramic CAP.	E	50WV	0.001uF
C4014	K12171102	Ceramic CAP.	E	50WV	0.001uF
C4015	K40179013	AL. Electro. CAP.		50WV	1uF
C4016	K40109001	AL. Electro. CAP.		10WV	100uF
C4017	K13179010	Ceramic CAP.	F	50WV	0.022uF
C4018	K40179016	AL. Electro. CAP.		50WV	0.1uF
C4019	K19149007	Ceramic CAP.		25WV	0.0033uF
C4020	K19149025	Ceramic CAP.		25WV	0.1uF
C4021	K70167224	Tantalum CAP.		35WV	0.22uF
C4022	K70167224	Tantalum CAP.		35WV	0.22uF
C4023	K19149002	Ceramic CAP.		25WV	0.0012uF
C4024	K19149001	Ceramic CAP.		25WV	0.001uF
C4025	K19149013	Ceramic CAP.		25WV	0.01uF
C4026	K19149002	Ceramic CAP.		25WV	0.0012uF
C4027	K40129004	AL. Electro. CAP.		16WV	10uF
C4028	K12171102	Ceramic CAP.	E	50WV	0.001uF
C4029	K40179013	AL. Electro. CAP.		50WV	1uF
C4030	K40179013	AL. Electro. CAP.		50WV	1uF
C4032	K40129004	AL. Electro. CAP.		16WV	10uF
C4033	K19149025	Ceramic CAP.		25WV	0.1uF
C4034	K40179012	AL. Electro. CAP.		50WV	4.7uF
C4035	K40129004	AL. Electro. CAP.		16WV	10uF
C4036	K70147105	Tantalum CAP.		25WV	1uF
C4037	K00175150	Ceramic CAP.	SL	50WV	15pF
C4038	K13179010	Ceramic CAP.	F	50WV	0.022uF
C4039	K00173100	Ceramic CAP.	SL	50WV	10pF
C4040	K00172020	Ceramic CAP.	SL	50WV	2pF
C4041	K00175151	Ceramic CAP.	SL	50WV	150pF
C4042	K13179010	Ceramic CAP.	F	50WV	0.022uF
C4043	K13179010	Ceramic CAP.	F	50WV	0.022uF
C4044	K13179010	Ceramic CAP.	F	50WV	0.022uF
C4045	K12171102	Ceramic CAP.	E	50WV	0.001uF
C4046	K13179010	Ceramic CAP.	F	50WV	0.022uF
C4047	K40179013	AL. Electro. CAP.		50WV	1uF
C4048	K19149025	Ceramic CAP.		25WV	0.1uF
C4049	K19149009	Ceramic CAP.		25WV	0.004uF
C4050	K19149003	Ceramic CAP.		25WV	0.0015uF
C4051	K12171102	Ceramic CAP.	E	50WV	0.001uF
C4052	K40129004	AL. Electro. CAP.		16WV	10uF
C4053	K40179012	AL. Electro. CAP.		50WV	4.7uF

C4057	K05172050	Ceramic CAP.	RH	50WV	5
C4058	K05175220	Ceramic CAP.	RH	50WV	22
C4059	K05175151	Ceramic CAP.	RH	50WV	150
C4060	K05175151	Ceramic CAP.	RH	50WV	150
C4061	K13179010	Ceramic CAP.	F	50WV	0.022
C4062	K00175220	Ceramic CAP.	SL	50WV	22
C4063	K13179010	Ceramic CAP.	F	50WV	0.022
C4064	K13179010	Ceramic CAP.	F	50WV	0.022
C4065	K00175220	Ceramic CAP.	SL	50WV	22
C4066	K13179010	Ceramic CAP.	F	50WV	0.022
C4067	K13179010	Ceramic CAP.	F	50WV	0.022
C4068	K13179010	Ceramic CAP.	F	50WV	0.022
C4069	K12171102	Ceramic CAP.	E	50WV	0.001
C4070	K13179010	Ceramic CAP.	F	50WV	0.022
C4071	K12171102	Ceramic CAP.	E	50WV	0.001
C4072	K13179008	Ceramic CAP.	F	50WV	0.01
C4073	K12171102	Ceramic CAP.	E	50WV	0.001
C4074	K12171102	Ceramic CAP.	E	50WV	0.001
C4075	K13179008	Ceramic CAP.	F	50WV	0.01
C4076	K12171102	Ceramic CAP.	E	50WV	0.001
C4077	K13179010	Ceramic CAP.	F	50WV	0.022
C4078	K13179010	Ceramic CAP.	F	50WV	0.022
C4079	K13179008	Ceramic CAP.	F	50WV	0.01
C4080	K12171102	Ceramic CAP.	E	50WV	0.001
C4081	K12171102	Ceramic CAP.	E	50WV	0.001
C4082	K40109002	AL. Electro. CAP.		10WV	47
C4083	K13179010	Ceramic CAP.	F	50WV	0.022
C4084	K13179010	Ceramic CAP.	F	50WV	0.022
C4085	K12171102	Ceramic CAP.	E	50WV	0.001
C4086	K13179014	Ceramic CAP.	F	50WV	0.0047
C4087	K12171102	Ceramic CAP.	E	50WV	0.001
C4088	K12171102	Ceramic CAP.	E	50WV	0.001
C4089	K12171102	Ceramic CAP.	E	50WV	0.001
C4090	K70147105	Tantalum CAP.		25WV	1
C4091	K40109001	AL. Electro. CAP.		10WV	100
C4092	K13179010	Ceramic CAP.	F	50WV	0.022
C4093	K70127225	Tantalum CAP.		16WV	2.2
C4094	K70107475	Tantalum CAP.		10WV	4.7
C4095	K55209003	Film CAP.		10WV	0.0047
C4100	K12171102	Ceramic CAP.	E	50WV	0.001
C4101	K40129004	AL. Electro. CAP.		16WV	10
C4102	K40179013	AL. Electro. CAP.		50WV	1
C4103	K40179016	AL. Electro. CAP.		50WV	0.1
C4104	K70147105	Tantalum CAP.		10WV	1
C4105	K40179013	AL. Electro. CAP.		50WV	1
C4108	K13179010	Ceramic CAP.	F	50WV	0.022
C4109	K13179010	Ceramic CAP.	F	50WV	0.022
C4110	K12171102	Ceramic CAP.	E	50WV	0.001
C4111	K13179010	Ceramic CAP.	F	50WV	0.022
C4112	K12171102	Ceramic CAP.	E	50WV	0.001
C4113	K13179010	Ceramic CAP.	F	50WV	0.022
C4114	K13179009	Ceramic CAP.	F	50WV	0.047
C4116	K12171102	Ceramic CAP.	E	50WV	0.001
C4117	K02175121	Ceramic CAP.	CH	50WV	120
C4118	K02175121	Ceramic CAP.	CH	50WV	120
C4119	K40129054	AL. Electro. CAP.		16WV	47
C4120	K00175101	Ceramic CAP.	SL	50WV	100
C4121	K70107475	Tantalum CAP.		10WV	4.7
C4122	K70107685	Tantalum CAP.		10WV	6.8
C4123	K40129012	AL. Electro. CAP.		16WV	10
C4124	K19149021	Ceramic CAP.		25WV	0.047
C4125	K19149021	Ceramic CAP.		25WV	0.047
TC4001	K91000028	Variable CAP.	10pF		
T4001	L0021533	Coil			
T4002	L0021736	Coil			
T4003	L0021736	Coil			
L4001	L1190189	M.RFC	1mH		
L4002	L0020533	Coil			
L4003	L1190262	M.RFC	22uH		
L4004	L1190258	M.RFC	10uH		
L4005	L1190274	M.RFC	220uH		
L4006	L1190274	M.RFC	220uH		
L4008	L1190244	M.RFC	0.68uH		
J4001	P0090524	Connector			
J4002	P0090532	Connector			

PARTS LIST

003	P0090526	Connector	
004	P0090529	Connector	
005	P0090524	Connector	
006	P0090527	Connector	
007	P0090524	Connector	
008	P0090526	Connector	
009	P0090527	Connector	
010	P0090528	Connector	
011	P0090524	Connector	
001	P0090606	Connector	
	R0121120	Shield Case	

VOX AMP UNIT

ymbol No.	Part No.	Description	Device
	F2892102	Printed Circuit Board	
	C028922AA	PCB with Components	
9901	G1090559	IC	LA6324M
9902	G3327127G	Transistor	2SC2712GR TE85R
9903	G3327127G	Transistor	2SC2712GR TE85R
9901	G2070003	Diode	1SS226 TE85R
9901	J24205683	RES. Chip	1/10W 68k ohm
9902	J24205472	RES. Chip	1/10W 4.7k ohm
9903	J24205474	RES. Chip	1/10W 470k ohm
9904	J24205103	RES. Chip	1/10W 10k ohm
9905	J24205104	RES. Chip	1/10W 100k ohm
9906	J24205472	RES. Chip	1/10W 4.7k ohm
9907	J24205474	RES. Chip	1/10W 470k ohm
9908	J24205472	RES. Chip	1/10W 4.7k ohm
9909	J24205474	RES. Chip	1/10W 470k ohm
9910	J24205472	RES. Chip	1/10W 4.7k ohm
9911	J24205472	RES. Chip	1/10W 4.7k ohm
9912	J24205472	RES. Chip	1/10W 4.7k ohm
9913	J24205472	RES. Chip	1/10W 4.7k ohm
9914	J24205000	RES. Chip	1/10W 0 ohm
9901	K22141904	CAP. Chip	D 25WV 0.1uF
9902	K22141904	CAP. Chip	D 25WV 0.1uF
9903	K22170817	CAP. Chip	B 50WV 0.01uF
	Q5000057	Lead Frame	

13MHz TX PLL UNIT

ymbol No.	Part No.	Description	Device
	F2892110A	Printed Circuit Board	
	C02892AAA	PCB with Components	
9701	G1090739	IC	MC145163SL
9702	G3326197B	Transistor	2SC2619FBTR
9703	G3326197B	Transistor	2SC2619FBTR
9701	J24205102	RES. Chip	1/10W 1k ohm
9702	J24205332	RES. Chip	1/10W 3.3k ohm
9703	J24205104	RES. Chip	1/10W 100k ohm
9704	J24205102	RES. Chip	1/10W 1k ohm
9705	J24205472	RES. Chip	1/10W 4.7k ohm
9706	J24205103	RES. Chip	1/10W 10k ohm
9707	J24205102	RES. Chip	1/10W 1k ohm
9708	J24205104	RES. Chip	1/10W 100k ohm
9701	K22170817	CAP. Chip	B 50WV 0.01uF
9702	K22170817	CAP. Chip	B 50WV 0.01uF
9703	K22170817	CAP. Chip	B 50WV 0.01uF
9704	K22170203	CAP. Chip	CH 50WV 2PF
9705	K22170817	CAP. Chip	B 50WV 0.01uF
9706	K22170817	CAP. Chip	B 50WV 0.01uF
	Q5000057	Lead Frame	

AF UNIT

ymbol No.	Part No.	Description	Device
	F2887103A	Printed Circuit Board	
	C028873AA	PCB with Components	

Q5001	G3304600B	Transistor	2SC460B
Q5002	G3304600B	Transistor	2SC460B
Q5003	G3304600B	Transistor	2SC460B
Q5004	G3304600B	Transistor	2SC460B
Q5005	G3304600B	Transistor	2SC460B
Q5006	G1090164	IC	uPC2002H
Q5008	G3304580C	Transistor	2SC458C
Q5009	G3304580C	Transistor	2SC458C
Q5010	G1090080	IC	uPC78L08
R5001	J02225153	Carbon Film RES.	1/6W 15k ohm UJ
R5002	J02225223	Carbon Film RES.	1/6W 22k ohm UJ
R5003	J02225471	Carbon Film RES.	1/6W 470 ohm UJ
R5004	J02225153	Carbon Film RES.	1/6W 15k ohm UJ
R5005	J02225223	Carbon Film RES.	1/6W 22k ohm UJ
R5006	J02225471	Carbon Film RES.	1/6W 470 ohm UJ
R5007	J02225153	Carbon Film RES.	1/6W 15k ohm UJ
R5008	J02225223	Carbon Film RES.	1/6W 22k ohm UJ
R5009	J02225471	Carbon Film RES.	1/6W 470 ohm UJ
R5010	J02225153	Carbon Film RES.	1/6W 15k ohm UJ
R5011	J02225223	Carbon Film RES.	1/6W 22k ohm UJ
R5012	J02225471	Carbon Film RES.	1/6W 470 ohm UJ
R5013	J02225153	Carbon Film RES.	1/6W 15k ohm UJ
R5014	J02225223	Carbon Film RES.	1/6W 22k ohm UJ
R5015	J02225471	Carbon Film RES.	1/6W 470 ohm UJ
R5016	J02225680	Carbon Film RES.	1/6W 68 ohm UJ
R5018	J02225103	Carbon Film RES.	1/6W 10k ohm UJ
R5019	J02225223	Carbon Film RES.	1/6W 22k ohm UJ
R5020	J02225104	Carbon Film RES.	1/6W 100k ohm UJ
R5021	J02225104	Carbon Film RES.	1/6W 100K ohm UJ
R5022	J02275221	Carbon Film RES.	1/2W 220 ohm VJ
R5023	J02245229	Carbon Film RES.	1/4W 2.2 ohm SJ
R5024	J02245010	Carbon Film RES.	1/4W 1 ohm SJ
R5026	J02225102	Carbon Film RES.	1/6W 1k ohm UJ
R5027	J02225472	Carbon Film RES.	1/6W 4.7k ohm UJ
R5028	J02245229	Carbon Film RES.	1/4W 2.2 ohm SJ
R5029	J02225332	Carbon Film RES.	1/6W 3.3k ohm UJ
R5030	J02245010	Carbon Film RES.	1/4W 1 ohm SJ
C5001	K12171102	Ceramic CAP.	E 50WV 0.001uF
C5002	K12171102	Ceramic CAP.	E 50WV 0.001uF
C5003	K12171102	Ceramic CAP.	E 50WV 0.001uF
C5004	K12171102	Ceramic CAP.	E 50WV 0.001uF
C5005	K12171102	Ceramic CAP.	E 50WV 0.001uF
C5006	K12171102	Ceramic CAP.	E 50WV 0.001uF
C5007	K12171102	Ceramic CAP.	E 50WV 0.001uF
C5008	K12171102	Ceramic CAP.	E 50WV 0.001uF
C5009	K12171102	Ceramic CAP.	E 50WV 0.001uF
C5010	K12171102	Ceramic CAP.	E 50WV 0.001uF
C5011	K19149017	Ceramic CAP.	25WV 0.022uF
C5012	K12171102	Ceramic CAP.	E 50WV 0.001uF
C5013	K40179013	AL. Electro. CAP.	50WV 1uF
C5014	K01175101	Ceramic CAP.	SL 50WV 100pF
C5015	K12171102	Ceramic CAP.	E 50WV 0.001uF
C5016	K40109007	AL. Electro. CAP.	10WV 220uF
C5017	K40109012	AL. Electro. CAP.	10WV 1000uF
C5018	K19149025	Ceramic CAP.	25WV 0.1uF
C5019	K12171102	Ceramic CAP.	E 50WV 0.001uF
C5020	K40129050	AL. Electro. CAP.	16WV 2200uF
C5022	K40129004	AL. Electro. CAP.	16WV 10uF
C5024	K40129004	AL. Electro. CAP.	16WV 10uF
C5025	K12171102	Ceramic CAP.	E 50WV 0.001uF
C5026	K12171102	Ceramic CAP.	E 50WV 0.001uF
C5029	K13179010	Ceramic CAP.	F 50WV 0.022uF
C5030	K13179010	Ceramic CAP.	F 50WV 0.022uF
C5031	K13179010	Ceramic CAP.	F 50WV 0.022uF
C5032	K19129013	Ceramic CAP.	25WV 0.01uF
J5001	P0090525	Connector	
J5002	P0090524	Connector	
J5003	P0090524	Connector	
J5004	P0090526	Connector	
J5005	P0090525	Connector	
J5006	P0090524	Connector	
J5007	P0090524	Connector	
J5008	P0090524	Connector	
J5009	P0090524	Connector	
J5010	P0090535	Connector	
J5011	P0090535	Connector	
J5012	P0090535	Connector	
J5013	P0090535	Connector	

PARTS LIST

J5014	P0090525	Connector	
J5015	P0090527	Connector	
J5016	P0090429	Connector	
J5017	P0090429	Connector	
J5018	P0090429	Connector	
J5019	P0090429	Connector	
J5020	P0090525	Connector	
	R0087040A	AF Heatshink	
	R0102810	Nut Board	

144MHz MAIN UNIT

Symbol No.	Part No.	Description	Device
	F288101A	Printed Circuit Board	
	C028881AX	PCB with Components: as shown below	
Q6001	G4801220L	FET	3SK122L
Q6002	G2090247	Diode	ND487C1-3R
Q6003	G4801220L	FET	3SK122L
Q6004	G3090079	Transistor	BA1A4P
Q6005	G3802410G	FET	2SK241GR
Q6006	G3802410G	FET	2SK241GR
Q6007	G3320260	Transistor	2SC2026
Q6008	G3320530	Transistor	2SC2053
Q6009	G3801921G	FET	2SK19ZAGR
Q6010	G3802410G	FET	2SK241GR
Q6011	G3305350B	Transistor	2SC535B
Q6012	G3304580C	Transistor	2SC458C
Q6013	G3802410G	FET	2SK241GR
Q6014	G3802410G	FET	2SK241GR
Q6015	G3305350B	Transistor	2SC535B
Q6016	G3305350B	Transistor	2SC535B
Q6017	G1090798	IC	MC145155P
Q6018	G3304580C	Transistor	2SC458C
Q6019	G3304580C	Transistor	2SC458C
Q6020	G1090084	IC	uPC78L05
Q6021	G1090707	IC	MC145156P
Q6022	G1090795	IC	MB504
Q6027	G1090796	IC	MB505-16
Q6028	G1090247	IC	TC9122P
Q6029	G1090473	IC	TC5081AP
Q6030	G3304600B	Transistor	2SC460B
Q6031	G3305350B	Transistor	2SC535B
Q6032	G3305350B	Transistor	2SC535B
Q6033	G3802410G	FET	2SK241GR
Q6034	G3304600B	Transistor	2SC460B
C6035	G3207720Q	Transistor	2SB772Q
C6036	G3207720Q	Transistor	2SB772Q
Q3037	G3115280	Transistor	2SA1528
Q6038	G3115280	Transistor	2SA1528
Q6039	G3C90079	TransistoR	BA1A4P
Q6040	G3090079	TransistoR	BA1A4P
D6001	G2090408	Diode	1SS270
D6002	G2090027	Diode	1SS53
D6003	G2090027	Diode	1SS53
D6004	G2022090	Diode	1S2209
D6005	G2022090	Diode	1S2209
D6006	G2022090	Diode	1S2209
D6007	G2022090	Diode	1S2209
D6008	G2015550	Diode	1S1555
D6009	G2090271	Diode	1T33
D6010	G2090271	Diode	1T33
D6011	G2022090	Diode	1S2209
D6012	G2090027	Diode	1SS53
D6013	G2090027	Diode	1SS53
D6014	G2090408	Diode	1SS270
D6017	G2090384	Diode	HZ7C2
D6018	G2022090	Diode	1S2209
D6019	G2090408	Diode	1SS270
D6020	G2090408	Diode	1SS270
D6021	G2090408	Diode	1SS270
D6022	G2090408	Diode	1SS270
D6023	G2090408	Diode	1SS270
D6025		See Model Chart	
D6026		See Model Chart	
D6027		See Model Chart	
D6030		See Model Chart	
D6031		See Model Chart	
D6032	G2090408	Diode	1SS270
TH6001	G9090026	Thermistor	
TH6002	G9090020	Thermistor	

X6001	H0102814	XTAL	HC-48/T 20.5043MHz
XF6001	H1102126	XTAL Filter	13M20A
R6001	J02225473	Carbon Film RES.	1/6W 47k ohm
R6002	J02225470	Carbon Film RES.	1/6W 47 ohm
R6003	J02225225	Carbon Film RES.	1/6W 2.2M ohm
R6004	J02225470	Carbon Film RES.	1/6W 47 ohm
R6005	J02225102	Carbon Film RES.	1/6W 1K ohm
R6006	J02225331	Carbon Film RES.	1/6W 330 ohm
R6007	J02225180	Carbon Film RES.	1/6W 18 ohm
R6008	J02225331	Carbon Film RES.	1/6W 330 ohm
R6009	J02225473	Carbon Film RES.	1/6W 47k ohm
R6010	J02225470	Carbon Film RES.	1/6W 47 ohm
R6011	J02225473	Carbon Film RES.	1/6W 47k ohm
R6012	J02225473	Carbon Film RES.	1/6W 47K ohm
R6013	J02225470	Carbon Film RES.	1/6W 47 ohm
R6014	J02225680	Carbon Film RES.	1/6W 68 ohm
R6015	J02225681	Carbon Film RES.	1/6W 680 ohm
R6016	J02225680	Carbon Film RES.	1/6W 68 ohm
R6017	J02225221	Carbon Film RES.	1/6W 220 ohm
R6018	J02225101	Carbon Film RES.	1/6W 100 ohm
R6019	J02225101	Carbon Film RES.	1/6W 100 ohm
R6020	J02225470	Carbon Film RES.	1/6W 47 ohm
R6021	J02225560	Carbon Film RES.	1/6W 56 ohm
R6022	J01225473	Carbon Film RES.	1/6W 47k ohm
R6023	J01225473	Carbon Film RES.	1/6W 47k ohm
R6024	J02225104	Carbon Film RES.	1/6W 100k ohm
R6025	J02225104	Carbon Film RES.	1/6W 100k ohm
R6026	J02225101	Carbon Film RES.	1/6W 100 ohm
R6027	J02225104	Carbon Film RES.	1/6W 100k ohm
R6028	J02225104	Carbon Film RES.	1/6W 100k ohm
R6029	J02225104	Carbon Film RES.	1/6W 100k ohm
R6030	J01225104	Carbon Film RES.	1/6W 100k ohm
R6031	J01225561	Carbon Film RES.	1/6W 560 ohm
R6032	J02225221	Carbon Film RES.	1/6W 220 ohm
R6033	J02225220	Carbon Film RES.	1/6W 22 ohm
R6034	J01225479	Carbon Film RES.	1/6W 4.7 ohm
R6035	J02225821	Carbon Film RES.	1/6W 820 ohm
R6036	J02225474	Carbon Film RES.	1/6W 470k ohm
R6037	J02225101	Carbon Film RES.	1/6W 100 ohm
R6038	J02225101	Carbon Film RES.	1/6W 100 ohm
R6039	J02225473	Carbon Film RES.	1/6W 47k ohm
R6040	J02225223	Carbon Film RES.	1/6W 22k ohm
R6041	J02225103	Carbon Film RES.	1/6W 10k ohm
R6042	J01225221	Carbon Film RES.	1/6W 220 ohm
R6043	J02225104	Carbon Film RES.	1/6W 100k ohm
R6044	J01225562	Carbon Film RES.	1/6W 5.6k ohm
R6045	J01225103	Carbon Film RES.	1/6W 10k ohm
R6046	J02225560	Carbon Film RES.	1/6W 56 ohm
R6047	J02225222	Carbon Film RES.	1/6W 2.2k ohm
R6048	J02225222	Carbon Film RES.	1/6W 2.2k ohm
R6049	J02225473	Carbon Film RES.	1/6W 47k ohm
R6050	J02225471	Carbon Film RES.	1/6W 470 ohm
R6051	J01225223	Carbon Film RES.	1/6W 22k ohm
R6052	J02225562	Carbon Film RES.	1/6W 5.6k ohm
R6053	J02225102	Carbon Film RES.	1/6W 1k ohm
R6054	J02225473	Carbon Film RES.	1/6W 47k ohm
R6055	J02225470	Carbon Film RES.	1/6W 47 ohm
R6056	J01225471	Carbon Film RES.	1/6W 470 ohm
R6057	J01225103	Carbon Film RES.	1/6W 10k ohm
R6058	J01225222	Carbon Film RES.	1/6W 2.2k ohm
R6059	J02225681	Carbon Film RES.	1/6W 680 ohm
R6060	J02225471	Carbon Film RES.	1/6W 470 ohm
R6061	J02225102	Carbon Film RES.	1/6W 1k ohm
R6062	J02225102	Carbon Film RES.	1/6W 1k ohm
R6064	J02225103	Carbon Film RES.	1/6W 10k ohm
R6065	J02225332	Carbon Film RES.	1/6W 3.3k ohm
R6066	J02225101	Carbon Film RES.	1/6W 100 ohm
R6067	J02225332	Carbon Film RES.	1/6W 3.3k ohm
R6068	J02225103	Carbon Film RES.	1/6W 10k ohm
R6069	J02225681	Carbon Film RES.	1/6W 680 ohm
R6071	J02225101	Carbon Film RES.	1/6W 100 ohm
R6072	J02225222	Carbon Film RES.	1/6W 2.2k ohm
R6073	J01225151	Carbon Film RES.	1/6W 150 ohm
R6074	J02225222	Carbon Film RES.	1/6W 2.2k ohm
R6075	J02225471	Carbon Film RES.	1/6W 470 ohm
R6076	J01225102	Carbon Film RES.	1/6W 1k ohm
R6088	J02225560	Carbon Film RES.	1/6W 56 ohm
R6089	J02225101	Carbon Film RES.	1/6W 100 ohm
R6090	J02225332	Carbon Film RES.	1/6W 3.3k ohm
R6091	J02225222	Carbon Film RES.	1/6W 2.2k ohm
R6092	J02225104	Carbon Film RES.	1/6W 100k ohm
R6093	J01225472	Carbon Film RES..	1/6W 4.7k ohm
R6094	J02225333	Carbon Film RES.	1/6W 33k ohm
R6095	J02225473	Carbon Film RES.	1/6W 47k ohm

Version	PCB with Components w/o 144MHz ALC UNIT, 144MHz SHIFT UNIT, 144MHz SUB VCO UNIT	PCB with Components w/o 144MHz ALC UNIT, 144MHz SHIFT UNIT, 144MHz SUB VCO UNIT
A1 H2	C028881AA	C028881AJ
A2 H3	C028881AB	C028881AK
B1	C028881AC	C028881AL
B2 C2	C028881AD	C028881AM

Version	PCB with Components w/o 144MHz ALC UNIT, 144MHz SHIFT UNIT, 144MHz SUB VCO UNIT	PCB with Components w/o 144MHz ALC UNIT, 144MHz SHIFT UNIT, 144MHz SUB VCO UNIT
B3,C3	C028881AE	C028881AN
C1	C028881AF	C028881AP
F	C028881AG	C028881AQ
H1	C028881AH	C028881AR

096	J01225102	Carbon Film RES.	1/6W	1k ohm	PJ
097	J02225101	Carbon Film RES.	1/6W	100 ohm	UJ
098	J02225473	Carbon Film RES.	1/6W	47k ohm	UJ
099	J01225223	Carbon Film RES.	1/6W	22k ohm	PJ
100	J02225562	Carbon Film RES.	1/6W	5.6k ohm	UJ
101	J01225331	Carbon Film RES.	1/6W	330 ohm	PJ
102	J01225101	Carbon Film RES.	1/6W	100 ohm	PJ
103	J02225560	Carbon Film RES.	1/6W	56 ohm	UJ
104	J01225223	Carbon Film RES.	1/6W	22k ohm	PJ
105	J01225682	Carbon Film RES.	1/6W	6.8k ohm	PJ
106	J01225331	Carbon Film RES.	1/6W	330 ohm	PJ
107	J01225101	Carbon Film RES.	1/6W	100 ohm	PJ
108	J01225331	Carbon Film RES.	1/6W	330 ohm	PJ
109	J02225101	Carbon Film RES.	1/6W	100 ohm	UJ
110	J02225471	Carbon Film RES.	1/6W	470 ohm	UJ
111	J02225223	Carbon Film RES.	1/6W	22k ohm	UJ
112	J02225562	Carbon Film RES.	1/6W	5.6k ohm	UJ
113	J02225331	Carbon Film RES.	1/6W	330 ohm	UJ
114	J02225102	Carbon Film RES.	1/6W	1k ohm	UJ
115	J02225105	Carbon Film RES.	1/6W	1M ohm	UJ
116	J02225103	Carbon Film RES.	1/6W	10k ohm	UJ
117	J01225471	Carbon Film RES.	1/2W	470 ohm	TJ
118	J02225103	Carbon Film RES.	1/6W	10k ohm	UJ
119	J01225471	Carbon Film RES.	1/6W	470 ohm	PJ
120	J02225102	Carbon Film RES.	1/6W	1k ohm	UJ
121	J02225102	Carbon Film RES.	1/6W	1k ohm	UJ
122	J24205561	RES. Chip	1/10W	560 ohm	
123	J02225101	Carbon Film RES.	1/6W	100 ohm	UJ
125	J24205104	RES. Chip	1/10W	100k ohm	
126	J02225471	Carbon Film RES.	1/6W	470 ohm	UJ
6001	J51745102	POT.	B	1k ohm	
6002	J51745473	POT.	B	47k ohm	
6003	J51745473	POT.	B	47k ohm	
6004	J51745104	POT.	B	100k ohm	
001	K05173100	Ceramic CAP.	RH	50WV	10pF
002	K05172050	Ceramic CAP.	RH	50WV	5pF
003	K13179008	Ceramic CAP.	F	50WV	0.01uF
004	K13179008	Ceramic CAP.	F	50WV	0.01uF
005	K13179008	Ceramic CAP.	F	50WV	0.01uF
006	K13179008	Ceramic CAP.	F	50WV	0.01uF
007	K00172040	Ceramic CAP.	SL	50WV	4pF
008	K12171102	Ceramic CAP.	E	50WV	0.001uF
009	K13179014	Ceramic CAP.	F	50WV	0.0047uF
010	K12171102	Ceramic CAP.	E	50WV	0.001uF
011	K12171102	Ceramic CAP.	E	50WV	0.001uF
012	K13179014	Ceramic CAP.	F	50WV	0.0047uF
014	K00175330	Ceramic CAP.	SL	50WV	33pF
015	K10179024	Ceramic CAP.	B	50WV	0.01uF
016	K13179008	Ceramic CAP.	F	50WV	0.01uF
017	K13179008	Ceramic CAP.	F	50WV	0.01uF
018	K13179008	Ceramic CAP.	F	50WV	0.01uF
019	K13179014	Ceramic CAP.	F	50WV	0.0047uF
020	K13179014	Ceramic CAP.	F	50WV	0.0047uF
021	K13179008	Ceramic CAP.	F	50WV	0.01uF
022	K00173100	Ceramic CAP.	SL	50WV	10pF
023	K00173100	Ceramic CAP.	SL	50WV	10pF
024	K13179008	Ceramic CAP.	F	50WV	0.01uF
025	K13179008	Ceramic CAP.	F	50WV	0.01uF
026	K05175150	Ceramic CAP.	RH	50WV	15pF
027	K05175150	Ceramic CAP.	RH	50WV	15pF
028	K05172020	Ceramic CAP.	RK	50WV	2pF
029	K13179008	Ceramic CAP.	F	50WV	0.01uF
030	K00175120	Ceramic CAP.	SL	50WV	12pF
031	K05173080	Ceramic CAP.	RH	50WV	8pF
032	K05172020	Ceramic CAP.	RK	50WV	2pF
033	K02172059	Ceramic CAP.	CK	50WV	0.5pF
034	K05173080	Ceramic CAP.	RH	50WV	8pF
035	K05172020	Ceramic CAP.	RK	50WV	2pF
036	K00175120	Ceramic CAP.	SL	50WV	12pF
037	K05173080	Ceramic CAP.	RH	50WV	8pF
038	K02179001	Ceramic CAP.	CK	50WV	1pF
039	K00173070	Ceramic CAP.	SL	50WV	7pF
040	K13179014	Ceramic CAP.	F	50WV	0.0047uF
041	K12171102	Ceramic CAP.	E	50WV	0.001uF
042	K12171102	Ceramic CAP.	E	50WV	0.001uF
043	K40129004	AL. Electro. CAP.		16WV	10uF
044	K12171102	Ceramic CAP.	E	50WV	0.001uF
045	K13179014	Ceramic CAP.	F	50WV	0.0047uF
046	K00175180	Ceramic CAP.	SL	50WV	18pF
047	K13179014	Ceramic CAP.	F	50WV	0.0047uF
048	K40129004	AL. Electro. CAP.		16WV	10uF
049	K02172040	Ceramic CAP.	CH	50WV	4pF
050	K13179008	Ceramic CAP.	F	50WV	0.01uF

C6051	K40129004	AL. Electro. CAP.		16WV	10uF
C6052	K22170204	CAP. Chip		50WV	3pF
C6053	K13179008	Ceramic CAP.	F	50WV	0.01uF
C6054	K12171102	Ceramic CAP.	E	50WV	0.01uF
C6055	K12171102	Ceramic CAP.	E	50WV	0.01uF
C6056	K06173070	Ceramic CAP.	UJ	50WV	7pF
C6057	K02173060	Ceramic CAP.	CH	50WV	6pF
C6058	K05172050	Ceramic CAP.	RJ	50WV	5pF
C6059	K06172050	Ceramic CAP.	UJ	50WV	5pF
C6060	K40109001	AL. Electro. CAP.		10WV	100uF
C6061	K12171102	Ceramic CAP.	E	50WV	0.001uF
C6062	K02172020	Ceramic CAP.	CK	50WV	2pF
C6063	K13179014	Ceramic CAP.	F	50WV	0.0047uF
C6064	K00172040	Ceramic CAP.	SL	50WV	4pF
C6065	K13179008	Ceramic CAP.	F	50WV	0.01uF
C6066	K00173070	Ceramic CAP.	SL	50WV	7pF
C6067	K02179001	Ceramic CAP.	CK	50WV	1pF
C6068	K13179008	Ceramic CAP.	F	50WV	0.01uF
C6069	K12171102	Ceramic CAP.	E	50WV	0.001uF
C6070	K12171102	Ceramic CAP.	E	50WV	0.001uF
C6071	K13179008	Ceramic CAP.	F	50WV	0.01uF
C6072	K02172059	Ceramic CAP.	CK	50WV	0.5pF
C6073	K13179014	Ceramic CAP.	F	50WV	0.0047uF
C6074	K02172040	Ceramic CAP.	CH	50WV	4pF
C6075	K12171102	Ceramic CAP.	E	50WV	0.001uF
C6076	K00173100	Ceramic CAP.	SL	50WV	10pF
C6077	K00173100	Ceramic CAP.	SL	50WV	10pF
C6078	K12171102	Ceramic CAP.	E	50WV	0.001uF
C6079	K70147105	Tantalum CAP.		25WV	1uF
C6080	K13179008	Ceramic CAP.	F	50WV	0.01uF
C6081	K40109001	AL. Electro. CAP.		10WV	100uF
C6082	K70147105	Tantalum CAP.		25WV	1uF
C6084	K19149021	Ceramic CAP.		25WV	0.047uF
C6085	K19149021	Ceramic CAP.		25WV	0.047uF
C6086	K12171102	Ceramic CAP.	E	50WV	0.001uF
C6087	K13179008	Ceramic CAP.	F	50WV	0.01uF
C6088	K13179008	Ceramic CAP.	F	50WV	0.01uF
C6089	K00175470	Ceramic CAP.	SL	50WV	47pF
C6090	K00175220	Ceramic CAP.	SL	50WV	22pF
C6091	K13179008	Ceramic CAP.	F	50WV	0.01uF
C6092	K13179008	Ceramic CAP.	F	50WV	0.01uF
C6093	K12171102	Ceramic CAP.	E	50WV	0.001uF
C6094	K70167104	Tantalum CAP.		35WV	0.1uF
C6095	K40109002	AL. Electro. CAP.		10WV	47uF
C6096	K13179008	Ceramic CAP.	F	50WV	0.01uF
C6097	K40109001	AL. Electro. CAP.		10WV	100uF
C6098	K12171102	Ceramic CAP.	E	50WV	0.001uF
C6099	K12171102	Ceramic CAP.	E	50WV	0.001uF
C6100	K12171102	Ceramic CAP.	E	50WV	0.001uF
C6101	K19149021	Ceramic CAP.		25WV	0.047uF
C6102	K12171102	Ceramic CAP.	E	50WV	0.001uF
C6103	K70167474	Tantalum CAP.		35WV	0.47uF
C6104	K19149021	Ceramic CAP.		25WV	0.047uF
C6121	K12171102	Ceramic CAP.	E	50WV	0.001uF
C6122	K13179014	Ceramic CAP.	F	50WV	0.0047uF
C6123	K19149025	Ceramic CAP.		25WV	0.1uF
C5124	K12171102	Ceramic CAP.	E	50WV	0.001uF
C6125	K19149021	Ceramic CAP.		25WV	0.047uF
C6126	K40109001	AL. Electro. CAP.		10WV	100uF
C6127	K70167154	Tantalum CAP.		35WV	0.15uF
C6128	K19149021	Ceramic CAP.		25WV	0.047uF
C6129	K12171102	Ceramic CAP.	E	50WV	0.001uF
C6130	K05173080	Ceramic CAP.	RH	50WV	8pF
C6131	K02175101	Ceramic CAP.	CH	50WV	100pF
C6132	K05175470	Ceramic CAP.	RH	50WV	47pF
C6133	K13179008	Ceramic CAP.	F	50WV	0.01uF
C6134	K12171102	Ceramic CAP.	E	50WV	0.001uF
C6135	K02179001	Ceramic CAP.	CK	50WV	1pF
C6136	K00175101	Ceramic CAP.	SL	50WV	100pF
C6137	K13179008	Ceramic CAP.	F	50WV	0.01uF
C6138	K13179008	Ceramic CAP.	F	50WV	0.01uF
C6139	K05173090	Ceramic CAP.	RH	50WV	9pF
C6140	K40129004	AL. Electro. CAP.		16WV	10uF
C6141	K00173100	Ceramic CAP.	SL	50WV	10pF
C6142	K05173090	Ceramic CAP.	RH	50WV	9pF
C6143	K02172059	Ceramic CAP.	CK	50WV	0.5pF
C6144	K05173090	Ceramic CAP.	RH	50WV	9pF
C6145	K00175220	Ceramic CAP.	SL	50WV	22pF
C6146	K13179008	Ceramic CAP.	F	50WV	0.01uF
C6147	K05173090	Ceramic CAP.	RH	50WV	9pF

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C6148	K13179008	Ceramic CAP.	F	50WV	0.01uF
C6149	K13179008	Ceramic CAP.	F	50WV	0.01uF
C6150	K13179008	Ceramic CAP.	F	50WV	0.01uF
C6151	K13179008	Ceramic CAP.	F	50WV	0.01uF
C6152	K02172020	Ceramic CAP.	CK	50WV	2pF
C6153	K40129004	AL. Electro. CAP.		16WV	10uF
C6154	K13179008	Ceramic CAP.	F	50WV	0.01uF
C6155	K00172050	Ceramic CAP.	SL	50WV	5pF
C6156	K40179011	Ceramic CAP.		50WV	3.3uF
C6157	K13179008	Ceramic CAP.	F	50WV	0.01uF
C6158	K13179014	Ceramic CAP.	F	50WV	0.0047uF
C6159	K13179014	Ceramic CAP.	F	50WV	0.0047uF
C61[illegible]0	K19149013	Ceramic CAP.		25WV	0.01uF
C6161	K12171102	Ceramic CAP.	E	50WV	0.001uF
C6162	K00175101	Ceramic CAP.	SL	50WV	100pF
C6163	K12171102	Ceramic CAP.	E	50WV	0.001uF
C6164	K12171102	Ceramic CAP.	E	50WV	0.001uF
C6165	K12171102	Ceramic CAP.	E	50WV	0.001uF
C6166	K00175101	Ceramic CAP.	SL	50WV	100pF
C6167	K12171102	Ceramic CAP.	E	50WV	0.001uF
C6168	K12171102	Ceramic CAP.	E	50WV	0.001uF
C6169	K70167104	Tantalum CAP.		35WV	0.1uF
C6170	K40109001	AL. Electro. CAP.		10WV	100uF
C6172	K00175101	Ceramic CAP.	SL	50WV	100pF
C6173	K13179008	Ceramic CAP.	F	50WV	0.01uF
C6174	K22170221	CAP. Chip	CH	50WV	10pF
C6175	K22170805	CAP. Chip	B	50WV	0.001uF
C6176	K22170805	CAP. Chip	B	50WV	0.001uF
C6177	K22170805	CAP. Chip	B	50WV	0.001uF
C6179	K22171004	CAP. Chip	F	50WV	0.01uF
C6180	K22171004	CAP. Chip	F	50WV	0.01uF
C6181	K22171004	CAP. Chip	F	50WV	0.01uF
C6182	K22141804	CAP. Chip	B	25WV	0.022uF
C6183	K22170203	CAP. Chip	CH	50WV	2pF
TC6001	K91000028	Variable CAP.	10pF		
TC6002	K91000055	Variable CAP.	6pF		
T6001	L0020345	Coil			
T6002	L0021718	Coil			
T6003	L0021718	Coil			
T6004	L0021736	Coil			
T6005	L0021736	Coil			
T6006	L0021735	Coil			
T6007	L0021736	Coil			
T6008	L0020907	Coil			
T6009	L0020907	Coil			
T6010	L0020907	Coil			
T6011	L0020907	Coil			
T6012	L0020907	Coil			
T6013	L0020907	Coil			
T6014	L0020907	Coil			
T6015	L0020907	Coil			
T6016	L0020907	Coil			
L6001	L1020673	RFC			
L6002	L1020673	RFC			
L6003	L0020678	Coil			
L6004	L0020679	Coil			
L6005	L0020679	Coil			
L6006	L1020673	RFC			
L6007	L1190246	M.RFC			
L6008	L1190246	M.RFC			
L6009	L0190150	Coil			
L6010	L1190244	M.RFC			
L6012	L1190246	M.RFC			
L6013	L1190189	M.RFC			
L6014	L1190189	M.RFC			
L6015	L1190270	M.RFC			
L6022	L1190270	M.RFC			
L6023	L0020652	Coil			
L6024	L1190270	M.RFC			
L6025	L1190228	M.RFC			
L6026	L1190257	M.RFC	8.2uH		
L6027	L1190257	M.RFC	8.2uH		
CV6001	L4020080	Helical Resonator			
FB6001	L9190001	Ferrite Beads			
J6001	P1090210	Connector			
J6002	P0090525	Connector			
J6003	P0090526	Connector			
J6004	P1090210	Connector			
J6005	P0090527	Connector			

J6006	P0090526	Connector	
J6007	P0090525	Connector	
J6008	P0090524	Connector	
J6009	P0090532	Connector	
TP6001	Q5000036	TP-G	MK-1095
TP6002	Q5000036	TP-G	MK-1095
TP6003	Q5000036	TP-G	MK-1095
TP6004	Q5000036	TP-G	MK-1095
	R0062770B	VCO Case A	
	R0062780A	VCO Case Lid	
	R0122640	Spring Plate	
	R0122650	Spring Plate	
	R0123550	Leaf Spring	

144MHz ALC UNIT

Symbol No.	Part No.	Description	Device
	F2892104A	Printed Circuit Board	
	C028924AA	PCB with Components	
Q9501	G1090564	IC	uPC358G
D9501	G2070001	Diode	1SS181 TE85R
D9502	G2070001	Diode	1SS181 TE85R
R9501	J24205223	RES. Chip	1/10W 22k ohm
R9502	J24205103	RES. Chip	1/10W 10k ohm
R9503	J24205473	RES. Chip	1/10W 47k ohm
R9504	J24205223	RES. Chip	1/10W 22k ohm
R9505	J24205000	RES. Chip	1/10W 0 ohm
R9506	J24205000	RES. Chip	1/10W 0 ohm
R9507	J24205000	RES. Chip	1/10W 0 ohm
R9508	J24205104	RES. Chip	1/10W 100k ohm
R9509	J24205223	RES. Chip	1/10W 22k ohm
R9510	J24205473	RES. Chip	1/10W 47k ohm
R9511	J24205473	RES. Chip	1/10W 47k ohm
C9501	K22170227	CAP. Chip	CH 50WV 47
C9503	K22170227	CAP. Chip	CH 50WV 47
C9504	K22170805	CAP. Chip	B 50WV 0.001
C9505	K22170805	CAP. Chip	B 50WV 0.001
	Q5000057	Lead Frame	

144MHz SHIFT UNIT

Symbol No.	Part No.	Description	Device
	F2892107	Printed Circuit Board	
	F028927AA	PCB with Components	
Q9101	G3327127G	Tramsistor	2SC2712GR-TE85R
Q9102	G3327127G	Tramsistor	2SC2712GR-TE85R
Q9103	G3327127G	Tramsistor	2SC2712GR-TE85R
Q9104	G3327127G	Tramsistor	2SC2712GR-TE85R
Q9105	G3327127G	Tramsistor	2SC2712GR-TE85R
Q9106	G3327127G	Tramsistor	2SC2712GR-TE85R
R9101	J24205473	RES. Chip	1/10W 47k ohm
R9102	J24205473	RES. Chip	1/10W 47k ohm
R9103	J24205473	RES. Chip	1/10W 47k ohm
R9104	J24205222	RES. Chip	1/10W 2.2k ohm
R9105	J24205222	RES. Chip	1/10W 2.2k ohm
R9106	J24205222	RES. Chip	1/10W 2.2k ohm
R9107	J24205473	RES. Chip	1/10W 47k ohm
R9108	J24205473	RES. Chip	1/10W 47k ohm
R9109	J24205473	RES. Chip	1/10W 47k ohm
R9110	J24205222	RES. Chip	1/10W 2.2k ohm
R9111	J24205222	RES. Chip	1/10W 2.2k ohm
R9112	J24205222	RES. Chip	1/10W 2.2k ohm
R9113	J24205000	RES. Chip	1/10W 0 ohm
C9101	K22170235	CAP. Chip	CH 50WV 100
C9102	K22170235	CAP. Chip	CH 50WV 100
C9103	K22170235	CAP. Chip	CH 50WV 100
C9104	K22170235	CAP. Chip	CH 50WV 100
C9105	K22170235	CAP. Chip	CH 50WV 100
C9106	K22170235	CAP. Chip	CH 50WV 100
	Q5000057	Lead Frame	

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144MHz SUB VCO UNIT

mbol No.	Part No.	Description	Device
	F2927000	Printed Circuit Board	
	C029270AA	PCB with Components	
024	G3805070F	FET	2SK507F
025	G3333550	Transistor	2SC3355
015	G2090180	Diode	FC53M-5
016	G2090180	Diode	FC53M-5
078	J02225560	Carbon Film RES.	1/6W 56 ohm UJ
079	J02225330	Carbon Film RES.	1/6W 33 ohm UJ
080	J02225331	Carbon Film RES.	1/6W 330 ohm UJ
081	J02225332	Carbon Film RES.	1/6W 3.3k ohm UJ
082	J02225103	Carbon Film RES.	1/6W 10k ohm UJ
083	J02225101	Carbon Film RES.	1/6W 100 ohm UJ
084	J02225101	Carbon Film RES.	1/6W 100 ohm UJ
087	J02225560	Carbon Film RES.	1/6W 56 ohm UJ
105	K13179014	Ceramic CAP.	F 50WV 0.0047uF
106	K00173070	Ceramic CAP.	SL 50WV 7pF
107	K02172020	Ceramic CAP.	CK 50WV 2pF
108	K19149021	Ceramic CAP.	25WV 0.047uF
109	K12171102	Ceramic CAP.	E 50WV 0.001uF
110	K05175180	Ceramic CAP.	RH 50WV 18pF
111	K12171102	Ceramic CAP.	E 50WV 0.001uF
112	K40109001	AL. Electro. CAP.	10WV 100uF
113	K06173080	Ceramic CAP.	RH 50WV 8pF
114	K05173080	Ceramic CAP.	RH 50WV 8pF
115	K02172059	Ceramic CAP.	CK 50WV 0.5pF
117	K12171102	Ceramic CAP.	E 50WV 0.001uF
118	K02172020	Ceramic CAP.	CK 50WV 2pF
119	K00173070	Ceramic CAP.	SL 50WV 7pF
120	K12171102	Ceramic CAP.	E 50WV 0.001uF
171	K13179014	Ceramic CAP.	F 50WV 0.0047uF
016	L1190258	M.RFC	10uH
017	L1190242	M.RFC	0.47uH
018	L1190242	M.RFC	0.47uH
019	L0190138	Coil	
020	L0021520	Coil	
021	L1190242	M.RFC	0.47uH
028	L0020852	Coil	
029	L0021359	Coil	
030	L0021359	Coil	
36003	L9190001	Ferrite Beads	
36004	L9190001	Ferrite Beads	
	R0062770B	VCO Case A	

144MHz PA UNIT

mbol No.	Part No.	Description	Device
	F2887104	Printed Circuit Board	
	C028874AA	PCB with Components: 10W Model	
	C028874AB	PCB with Components: 25W Model	
6501(10W)	G1090295	IC	M57713
6501(25W)	G1090474	IC	M57727
6501	G2090337	Diode	MI308
6502	G2090344	Diode	1SV178
6503	G2090344	Diode	1SV178
6504	G2090118	Diode	1SS97
6505	G2090118	Diode	1SS97
6501	J31309002	RES.	1W 0.1 ohm
6502(25W)	J31309002	RES.	1W 0.1 ohm
6503	J01275151	Carbon Film RES.	1/2W 150 ohm TJ
6504	J02245103	Carbon Film RES.	1/4W 10k ohm SJ
6505	J02245103	Carbon Film RES.	1/4W 10k ohm SJ
6502	K10176102	Ceramic CAP.	B 50WV 0.001uF
6503	K13179008	Ceramic CAP.	F 50WV 0.01uF
6504	K40129004	AL. Electro. CAP.	16WV 10uF
6505	K10176102	Ceramic CAP.	B 50WV 0.001uF
C6506	K13179008	Ceramic CAP.	F 50WV 0.01uF
C6507	K40129004	AL. Electro. CAP.	16WV 10uF
C6508	K10176102	Ceramic CAP.	B 50WV 0.001uF
C6509	K13179008	Ceramic CAP.	F 50WV 0.01uF
C6510	K40129004	AL. Electro. CAP.	16WV 10uF
C6511	K02175180	Ceramic CAP.	CH 50WV 18pF
C6513	K02175330	Ceramic CAP.	CH 50WV 33pF
C6514	K02179001	Ceramic CAP.	CK 50WV 1pF
C6515(25W)	K02172040	Ceramic CAP.	CH 50WV 4pF
C6516	K02175180	Ceramic CAP.	CH 50WV 8pF
C6517	K02179001	Ceramic CAP.	CK 50WV 1pF
C6518	K02175180	Ceramic CAP.	CH 50WV 18pF
C6519	K02175180	Ceramic CAP.	CH 50WV 18pF
C6520	K02175180	Ceramic CAP.	CH 50WV 18pF
C6521	K02175180	Ceramic CAP.	CH 50WV 18pF
C6522	K02175180	Ceramic CAP.	CH 50WV 18pF
C6523(10W)	K02173060	Ceramic CAP.	CH 50WV 6pF
C6523(25W)	K02173100	Ceramic CAP.	CH 50WV 10pF
C6524(10W)	K02173060	Ceramic CAP.	CH 50WV 6pF
C6524(25W)	K02173100	Ceramic CAP.	CH 50WV 10pF
C6527	K02175150	Ceramic CAP.	CH 50WV 15pF
C6528	K10176102	Ceramic CAP.	B 50WV 0.001uF
C6529	K10176102	Ceramic CAP.	B 50WV 0.001uF
C6530	K10176102	Ceramic CAP.	B 50WV 0.001uF
C6531	K10176102	Ceramic CAP.	B 50WV 0.001uF
C6532	K10176102	Ceramic CAP.	B 50WV 0.001uF
C6533	K02173060	Ceramic CAP.	CH 50WV 6pF
L6501	L1020469	RFC	
L6502	L1020469	RFC	
L6503	L1020663	RFC	
L6504	L0021149	Coil	
L6505	L0021149	Coil	
L6506	L0021457	Coil	
L6508	L0021149	Coil	
L6509	L0021149	Coil	
L6510	L1190095	M.RFC	4.7uH
L6511	L1190254	M.RFC	4.7uH
L6512	L0020749	Coil	
	Q5000057	TP-G	MK-1095
	R6047250	Booster Spacer	

430MHz RF UNIT

Symbol No.	Part No.	Description	Device
	F2888102B	Printed Circuit Board	
	C028882AA	PCB with Components w/o VCO UNIT, 430MHz ALC UNIT, 430MHz LOCAL UNIT, PLL IC UNIT	
	C028882AB	PCB with Components w/ VCO UNIT, 430MHz ALC UNIT, 430MHz LOCAL UNIT, PLL IC UNIT	
Q7003	G3333550	Transistor	2SC3355
Q7004	G3333550	Transistor	2SC3355
Q7007	G3333550	Transistor	2SC3355
Q7008	G1090804	IC	uPC1656C
Q7010	G3304600B	Transistor	2SC460B
Q7011	G3304580C	Transistor	2SC458C
Q7012	G3802410G	FET	2SK241GR
Q7013	G3802410G	FET	2SK241GR
Q7014	G4801220L	FET	3SK122L
Q7015	G2090135	Diode	ND487C2-3R
Q7016	G1090804	IC	uPC1656C
Q7017	G3333550	Transistor	2SC3355
Q7018	G3090050	Transistor	2SC2407(1)
Q7022	G4801220L	FET	3SK122L
Q7023	G4800810	FET	3SK81
Q7024	G3090079	Transistor	BA1A4P
Q7025	G3090079	Transistor	BA1A4P
Q7026	G3207720Q	Transistor	2SB772Q
Q7027	G3207720Q	Transistor	2SB772Q

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Q7028	G3115280	Transistor	2SA1528	
Q7029	G3115280	Transistor	2SA1528	
Q7030	G3090079	Transistor	BA1A4P	
Q7031	G3304580C	Transistor	2SC458C	
Q7032	G3304580C	Transistor	2SC458C	
Q7033	G3802410G	FET	2SK241GR	
Q7034	G3090079	Transistor	BA1A4P	
D7003	G2090408	Diode	1SS270	
D7004	G2090027	Diode	1SS53	
D7005	G2090027	Diode	1SS53	
D7006	G2060004	Diode	1SS270TJ	
D7007	G2090027	Diode	1SS53	
D7008	G2015550	Diode	1S1555	
D7009	G2015550	Diode	1S1555	
D7010	G2090027	Diode	1SS53	
D7011	G2060004	Diode	1SS270TJ	
D7012	G2090027	Diode	1SS53	
D7013	G2090027	Diode	1SS53	
D7014	G2090408	Diode	1SS270	
D7015	G2090408	Diode	1SS270	
D7016	G2090408	Diode	1SS270	
D7017	G2090408	Diode	1SS270	
D7018	G2090408	Diode	1SS270	
D7019	G2060004	Diode	1SS270TJ	
TH7001	G9090026	Thermistor		
TH7002	G9090026	Thermistor		
TH7003	G9090026	Thermistor		
XF7001	H1102127	XTAL Filter	47L20A1	
R7008	J02225181	Carbon Film RES.	1/6W 180 ohm	UJ
R7009	J02225330	Carbon Film RES.	1/6W 33 ohm	UJ
R7010	J01225181	Carbon Film RES.	1/6W 180 ohm	PJ
R7011	J02225101	Carbon Film RES.	1/6W 100 ohm	UJ
R7012	J02225680	Carbon Film RES.	1/6W 68 ohm	UJ
R7013	J02225101	Carbon Film RES.	1/6W 100 ohm	UJ
R7014	J02225222	Carbon Film RES.	1/6W 2.2k ohm	UJ
R7015	J01225222	Carbon Film RES.	1/6W 2.2k ohm	PJ
R7016	J01225101	Carbon Film RES.	1/6W 100 ohm	PJ
R7017	J01225101	Carbon Film RES.	1/6W 100 ohm	PJ
R7018	J01225682	Carbon Film RES.	1/6W 6.8k ohm	PJ
R7019	J01225223	Carbon Film RES.	1/6W 22k ohm	PJ
R7025	J02225221	Carbon Film RES.	1/6W 220 ohm	UJ
R7026	J02225223	Carbon Film RES.	1/6W 22k ohm	UJ
R7027	J02225682	Carbon Film RES.	1/6W 6.8k ohm	UJ
R7028	J02225101	Carbon Film RES.	1/6W 100 ohm	UJ
R7029	J02225103	Carbon Film RES.	1/6W 10k ohm	UJ
R7030	J01225223	Carbon Film RES.	1/6W 22k ohm	PJ
R7031	J02225103	Carbon Film RES.	1/6W 10k ohm	UJ
R7032	J02225103	Carbon Film RES.	1/6W 10k ohm	UJ
R7033	J02245471	Carbon Film RES.	1/4W 470 ohm	SJ
R7034	J02245471	Carbon Film RES.	1/2W 470 ohm	TJ
R7037	J02225331	Carbon Film RES.	1/6W 330 ohm	UJ
R7039	J02225150	Carbon Film RES.	1/6W 15 ohm	UJ
R7040	J02225391	Carbon Film RES.	1/6W 390 ohm	UJ
R7041	J02225332	Carbon Film RES.	1/6W 3.3k ohm	UJ
R7042	J02225103	Carbon Film RES.	1/6W 10k ohm	UJ
R7043	J02225101	Carbon Film RES.	1/6W 100 ohm	UJ
R7044	J02225560	Carbon Film RES.	1/6W 56 ohm	UJ
R7045	J01225332	Carbon Film RES.	1/6W 3.3k ohm	PJ
R7046	J02225103	Carbon Film RES.	1/6W 10k ohm	UJ
R7047	J02225331	Carbon Film RES.	1/6W 330 ohm	UJ
R7048	J01225102	Carbon Film RES.	1/6W 1k ohm	PJ
R7049	J02225221	Carbon Film RES.	1/6W 220 ohm	UJ
R7050	J02225221	Carbon Film RES.	1/6W 220 ohm	UJ
R7051	J01225473	Carbon Film RES.	1/6W 47k ohm	PJ
R7052	J02225331	Carbon Film RES.	1/6W 330 ohm	UJ
R7053	J02225473	Carbon Film RES.	1/6W 47k ohm	UJ
R7054	J02225152	Carbon Film RES.	1/6W 1.5k ohm	UJ
R7055	J02225102	Carbon Film RES.	1/6W 1k ohm	UJ
R7056	J02225102	Carbon Film RES.	1/6W 1k ohm	UJ
R7060	J01225101	Carbon Film RES.	1/6W 100 ohm	PJ
R7061	J01225681	Carbon Film RES.	1/6W 680 ohm	PJ
R7062	J01225473	Carbon Film RES.	1/6W 47k ohm	PJ
R7063	J01225473	Carbon Film RES.	1/6W 47k ohm	PJ
R7064	J01225560	Carbon Film RES.	1/6W 56 ohm	PJ
R7065	J02225473	Carbon Film RES.	1/6W 47k ohm	UJ
R7066	J02225333	Carbon Film RES.	1/6W 33k ohm	UJ
R7067	J01225101	Carbon Film RES.	1/6W 100 ohm	PJ
R7068	J01225473	Carbon Film RES.	1/6W 47k ohm	PJ
R7069	J02225331	Carbon Film RES.	1/6W 330 ohm	UJ
R7070	J02225180	Carbon Film RES.	1/6W 18 ohm	UJ
R7071	J02225331	Carbon Film RES.	1/6W 330 ohm	UJ
R7072	J01225479	Carbon Film RES.	1/6W 4.7 ohm	PJ
R7074	J01225331	Carbon Film RES.	1/6W 330 ohm	PJ

R7075	J02225101	Carbon Film RES.	1/6W	100 ohm	
R7076	J02225471	Carbon Film RES.	1/6W	470 ohm	
R7077	J02225101	Carbon Film RES.	1/6W	100 ohm	
R7091	J01225225	Carbon Film RES.	1/6W	2.2M ohm	
R7092	J01225473	Carbon Film RES.	1/6W	47k ohm	
R7093	J01225470	Carbon Film RES.	1/6W	47 ohm	
R7094	J01225102	Carbon Film RES.	1/6W	1k ohm	
R7095	J01225560	Carbon Film RES.	1/6W	56 ohm	
R7096	J02225473	Carbon Film RES.	1/6W	47k ohm	
R7097	J01225473	Carbon Film RES.	1/6W	47k ohm	
R7098	J01225271	Carbon Film RES.	1/6W	270 ohm	
R7099	J01225560	Carbon Film RES.	1/6W	56 ohm	
R7100	J01225560	Carbon Film RES.	1/6W	56 ohm	
R7101	J02225680	Carbon Film RES.	1/6W	68 ohm	
R7102	J01225681	Carbon Film RES.	1/6W	680 ohm	
R7103	J01225560	Carbon Film RES.	1/6W	56 ohm	
R7104	J02225331	Carbon Film RES.	1/6W	330 ohm	
R7106	J02225104	Carbon Film RES.	1/6W	100k ohm	
R7107	J02225471	Carbon Film RES.	1/6W	470 ohm	
R7108	J02225221	Carbon Film RES.	1/6W	220 ohm	
R7109	J02225560	Carbon Film RES.	1/6W	56 ohm	
R7110	J24205680	RES. Chip	1/10W	68 ohm	
R7111	J01225472	Carbon Film RES.	1/6W	4.7k ohm	
R7112	J01225102	Carbon Film RES.	1/6W	1k ohm	
R7113	J24205101	RES. Chip	1/10W	100 ohm	
VR7001	J51745101	POT.	B	100 ohm	
VR7002	J51745102	POT.	B	1k ohm	
VR7003	J51745101	POT.	B	100 ohm	
VR7004	J51745473	POT.	B	47k ohm	
VR7005	J51745473	POT.	B	47k ohm	
VR7006	J51745104	POT.	B	100k ohm	
C7010	K12171102	Ceramic CAP.	E	50WV	0.001
C7011	K12171102	Ceramic CAP.	E	50WV	0.001
C7012	K12171102	Ceramic CAP.	E	50WV	0.001
C7013	K12171102	Ceramic CAP.	E	50WV	0.001
C7014	K12171102	Ceramic CAP.	E	50WV	0.001
C7015	K19149025	Ceramic CAP.		25WV	0.1
C7016	K13179008	Ceramic CAP.	F	50WV	0.01
C7017	K13179008	Ceramic CAP.	F	50WV	0.01
C7018	K13179008	Ceramic CAP.	F	50WV	0.01
C7019	K05175150	Ceramic CAP.	RH	50WV	15
C7020	K02172050	Ceramic CAP.	CH	50WV	5
C7024	K13179014	Ceramic CAP.	F	50WV	0.0047
C7025	K40129004	AL. Electro. CAP.		16WV	10
C7031	K13179014	Ceramic CAP.	F	50WV	0.0047
C7032	K13179014	Ceramic CAP.	F	50WV	0.0047
C7033	K00175470	Ceramic CAP.	SL	50WV	47
C7034	K00175101	Ceramic CAP.	SL	50WV	100
C7035	K12171102	Ceramic CAP.	E	50WV	0.001
C7036	K12171102	Ceramic CAP.	E	50WV	0.001
C7037	K40109002	AL. Electro. CAP.		10WV	47
C7038	K22170805	CAP. Chip.	B	50WV	0.001
C7040	K22170805	CAP. Chip.	B	50WV	0.001
C7041	K40129004	AL. Electro. CAP.		16WV	10
C7042	K12171102	Ceramic CAP.	E	50WV	0.001
C7043	K40129004	AL. Electro. CAP.		16WV	10
C7047	K02179001	Ceramic CAP.	CK	50WV	1
C7048	K12171102	Ceramic CAP.	E	50WV	0.001
C7049	K12171102	Ceramic CAP.	E	50WV	0.001
C7050	K05172020	Ceramic CAP.	RK	50WV	2
C7051	K12171102	Ceramic CAP.	E	50WV	0.001
C7052	K12171102	Ceramic CAP.	E	50WV	0.001
C7053	K13179010	Ceramic CAP.	F	50WV	0.022
C7055	K13179008	Ceramic CAP.	F	50WV	0.01
C7056	K00173080	Ceramic CAP.	SL	50WV	8
C7057	K00175220	Ceramic CAP.	SL	50WV	22
C7058	K05175220	Ceramic CAP.	RH	50WV	22
C7060	K00175470	Ceramic CAP.	SL	50WV	47
C7061	K13179014	Ceramic CAP.	F	50WV	0.0047
C7062	K40109001	AL. Electro. CAP.		10WV	100
C7063	K00173100	Ceramic CAP.	SL	50WV	10
C7064	K00175220	Ceramic CAP.	SL	50WV	22
C7065	K00175121	Ceramic CAP.	SL	50WV	120
C7066	K12171102	Ceramic CAP.	E	50WV	0.001
C7067	K40179013	AL. Electro. CAP.		50WV	1
C7068	K70147105	Tantalum CAP.		25WV	1
C7069	K19149021	Ceramic CAP.		25WV	0.047
C7070	K12171102	Ceramic CAP.	E	50WV	0.001
C7071	K00173070	Ceramic CAP.	SL	50WV	7

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072	K00173070	Ceramic CAP.	SL	50WV	7pF
073	K13179008	Ceramic CAP.	F	50WV	0.01uF
074	K13179008	Ceramic CAP.	F	50WV	0.01uF
075	K13179008	Ceramic CAP.	F	50WV	0.01uF
076	K40129004	AL. Electro. CAP.		16WV	10uF
077	K05172060	Ceramic CAP.	RH	50WV	6pF
078	K05172020	Ceramic CAP.	RK	50WV	2pF
080	K13179008	Ceramic CAP.	F	50WV	0.01uF
081	K13179008	Ceramic CAP.	F	50WV	0.01uF
082	K13179008	Ceramic CAP.	F	50WV	0.01uF
083	K13179008	Ceramic CAP.	F	50WV	0.01uF
084	K12171102	Ceramic CAP.	E	50WV	0.001uF
085	K05173080	Ceramic CAP.	RH	50WV	8pF
086	K00172050	Ceramic CAP.	SL	50WV	5pF
088	K00175470	Ceramic CAP.	SL	50WV	47pF
089	K12171102	Ceramic CAP.	E	50WV	0.001uF
090	K00175470	Ceramic CAP.	SL	50WV	47pF
091	K40129004	AL. Electro. CAP.		16WV	10uF
092	K12171102	Ceramic CAP.	E	50WV	0.001uF
094	K05175150	Ceramic CAP.	RH	50WV	15pF
095	K12171102	Ceramic CAP.	E	50WV	0.001uF
096	K40129004	AL. Electro. CAP.		16WV	10uF
097	K12171102	Ceramic CAP.	E	50WV	0.001uF
098	K05172050	Ceramic CAP.	RH	50WV	5pF
099	K40129004	AL. Electro. CAP.		16WV	10uF
100	K12171102	Ceramic CAP.	E	50WV	0.001uF
101	K12171102	Ceramic CAP.	E	50WV	0.001uF
102	K40129004	AL. Electro. CAP.		16WV	10uF
103	K13179008	Ceramic CAP.	F	50WV	0.01uF
7014	K12171102	Ceramic CAP.	E	50WV	0.001uF
7017	K40129004	AL. Electro. CAP.		16WV	10uF
7118	K13179008	Ceramic CAP.	F	50WV	0.01uF
7119	K12171102	Ceramic CAP.	E	50WV	0.001uF
7120	K13179008	Ceramic CAP.	F	50WV	0.01uF
7121	K13179008	Ceramic CAP.	F	50WV	0.01uF
7122	K13179008	Ceramic CAP.	F	50WV	0.01uF
7123	K13179008	Ceramic CAP.	F	50WV	0.01uF
7124	K13179008	Ceramic CAP.	F	50WV	0.01uF
7125	K00173100	Ceramic CAP.	SL	50WV	10pF
7126	K12171102	Ceramic CAP.	E	50WV	0.001uF
7127	K12171102	Ceramic CAP.	E	50WV	0.001uF
7128	K40129004	AL. Electro. CAP.		16WV	10uF
7129	K13179008	Ceramic CAP.	F	50WV	0.01uF
7130	K13179008	Ceramic CAP.	F	50WV	0.01uF
7131	K13179008	Ceramic CAP.	F	50WV	0.01uF
7132	K00172020	Ceramic CAP.	SL	50WV	2pF
7133	K12172102	Ceramic CAP.	E	50WV	0.001uF
7134	K12172102	Ceramic CAP.	E	50WV	0.001uF
7135	K12172102	Ceramic CAP.	E	50WV	0.001uF
7136	K12172102	Ceramic CAP.	E	50WV	0.001uF
7137	K12172102	Ceramic CAP.	E	50WV	0.001uF
7138	K12172102	Ceramic CAP.	E	50WV	0.001uF
7139	K12172102	Ceramic CAP.	E	50WV	0.001uF
7140	K12172102	Ceramic CAP.	E	50WV	0.001uF
7141	K12172102	Ceramic CAP.	E	50WV	0.001uF
7144	K05175180	Ceramic CAP.	RH	50WV	18pF
7145	K05175100	Ceramic CAP.	RH	50WV	10pF
7146	K22170805	CAP. Chip	B	50WV	0.001uF
7147	K22170805	CAP. Chip	B	50WV	0.001uF
7148	K22170235	CAP. Chip	CH	50WV	100pF
7149	K22170235	CAP. Chip	CH	50WV	100pF
7150	K22170235	CAP. Chip	CH	50WV	100pF
7152	K22170235	CAP. Chip	CH	50WV	100pF
7153	K22141809	CAP. Chip	B	25WV	0.1uF
7154	K13179008	Ceramic CAP.	F	50WV	0.01uF
7155	K19149021	Ceramic CAP.		25WV	0.047uF
C7002	K91000059	Variable CAP.	4pF		
C7003	K91000028	Variable CAP.	10pF		
7006	L0021358	Coil			
7007	L0021736	Coil			
7008	L0021740	Coil			
7009	L0021740	Coil			
7010	L0021740	Coil			
7011	L0021718	Coil			
7012	L0021718	Coil			
7019	L0021740	Coil			
7020	L0021740	Coil			
7021	L0021740	Coil			

T7022	L0021165	Coil	
T7023	L0021736	Coil	
T7024	L0021736	Coil	
L7006	L1190242	M.RFC	0.47uH
L7007	L1190254	M.RFC	0.47uH
L7008	L1190254	M.RFC	0.47uH
L7009	L1190242	M.RFC	0.47uH
L7012	L1190254	M.RFC	4.7uH
L7013	L1190250	M.RFC	2.2uH
L7014	L1190250	M.RFC	2.2uH
L7015	L1190270	M.RFC	100uH
L7016	L1190252	M.RFC	3.3uH
L7017	L0020886	Coil	
L7018	L0021359	Coil	
L7019	L0020474	Coil	
L7020	L0020852	Coil	
L7021	L0021359	Coil	
L7025	L1190246	M.RFC	1uH
L7026	L1190270	M.RFC	100uH
L7027	L1190244	M.RFC	0.68uH
L7028	L1190289	M.RFC	3.3uH
L7029	L1190246	M.RFC	1uH
CV7001	L4020086	Helical Resonator	
CV7002	L4020087	Helical Resonator	
CV7003	L4020081	Helical Resonator	
CV7004	L4020081	Helical Resonator	
FB7003	L9190001	Ferrite Beards	
FB7004	L9190001	Ferrite Beards	
J7001	P0090527	Connector	
J7002	P0090530	Connector	
J7004	P0090525	Connector	
J7005	P1090210	Connector	
J7006	P0090527	Connector	
J7009	P1090210	Connector	
J7010	P1090210	Connector	
J7013	P0090524	Connector	
J7014	P0090525	Connector	
J7015	P0090525	Connector	
J7016	P0090524	Connector	
J7017	P0090524	Connector	
TP7001	Q5000036	TP-G	MK-1095
	R0110610	Spring Board	
	R0122900	Shield Plate	
	R0056640	PLL IF Shield	
	R0121610B	Shield Plate	

VCO UNIT

Symbol No.	Part No.	Description	Device		
	F2889103	Printed Circuit Board			
	C028893AA	PCB with Components			
Q7401	G3801250	FET	2SK125		
Q7402	G3333550	Transistor	2SC3355		
D7401	G2090271	Diode	1T33		
D7402	G2090271	Diode	1T33		
R7401	J02225102	Carbon Film RES.	1/6W	1k ohm	UJ
R7402	J02225330	Carbon Film RES.	1/6W	33 ohm	UJ
R7403	J02225221	Carbon Film RES.	1/6W	220 ohm	UJ
R7404	J02225332	Carbon Film RES.	1/6W	3.3k ohm	UJ
R7405	J02225103	Carbon Film RES.	1/6W	10k ohm	UJ
R7406	J02225101	Carbon Film RES.	1/6W	100 ohm	UJ
R7407	J02225101	Carbon Film RES.	1/6W	100 ohm	UJ
C7401	K19149021	Ceramic CAP.		25WV	0.047uF
C7402	K12171102	Ceramic CAP.	E	50WV	0.001uF
C7403	K05173080	Ceramic CAP.	RH	50WV	8pF
C7404	K12171102	Ceramic CAP.	E	50WV	0.001uF
C7405	K40109015	AL. Electro. CAP.		10WV	100uF
C7406	K05173070	Ceramic CAP.	RH	50WV	7pF
C7407	K05173080	Ceramic CAP.	RH	50WV	8pF
C7408	K02172059	Ceramic CAP.	CK	50WV	0.5pF
C7409	K12171102	Ceramic CAP.	E	50WV	0.001uF
TC7401	K91000055	Variable CAP.	6pF		

PARTS LIST

L7401	L1190242	M.RFC	0.47uH
L7402	L1190242	M.RFC	0.47uH
L7403	F2896000		
L7404	L0021520	Coil	
L7405	L1190242	M.RFC	0.47uH
FB7401	L9190001	Ferrite Beads	
FB7402	L9190001	Ferrite Beads	
TP7401	Q5000036	TP-G	MK-1095
TP7402	Q5000036	TP-G	MK-1095
TP7403	Q5000036	TP-G	MK-1095
	R0062770B	VCO Case A	
	R0062780A	VCO Case Lid	
	R0121190	PCB Holder	

430MHz ALC UNIT

Symbol No.	Part No.	Description	Device
	F2892105A	Printed Circuit Board	
	C028925AA	PCB with Components	
Q9601	G1090564	IC	uPC358G
D9601	G2070001	Diode	1SS181 TE85R
D9602	G2070001	Diode	1SS181 TE85R
R9601	J24205223	RES. Chip	1/10W 22k ohm
R9602	J24205103	RES. Chip	1/10W 10k ohm
R9603	J24205473	RES. Chip	1/10W 47k ohm
R9604	J24205223	RES. Chip	1/10W 22k ohm
R9605	J24205000	RES. Chip	1/10W 0 ohm
R9606	J24205000	RES. Chip	1/10W 0 ohm
R9607	J24205000	RES. Chip	1/10W 0 ohm
R9608	J24205104	RES. Chip	1/10W 100k ohm
R9609	J24205223	RES. Chip	1/10W 22k ohm
R9610	J24205473	RES. Chip	1/10W 47k ohm
R9611	J24205473	RES. Chip	1/10W 47k ohm
C9601	K22170227	CAP. Chip	CH 50WV 47pF
C9603	K22170227	CAP. Chip	CH 50WV 47pF
C9604	K22170805	CAP. Chip	B 50WV 0.001uF
C9605	K22170805	CAP. Chip	B 50WV 0.001uF
	Q5000057	Lead Frame	

430MHz LOCAL UNIT

Symbol No.	Part No.	Description	Device
	F2919101	Printed Circuit Board	
	C029191AA	PCB with Components	
Q7701	G3802100G	FET	2SK210GR
Q7702	G3803020G	FET	2SK302GR
Q7703	G1090829	IC	MB503
Q7704	G1090739	IC	MC145163SL
Q7705	G3327120G	Transistor	2SC2712GR
D7701	G2090108	Diode	1SV68
D7702	G2090188	Diode	HZ5C1
R7701	J24205474	RES. Chip	1/10W 470k ohm
R7702	J24205221	RES. Chip	1/10W 220 ohm
R7703	J24205101	RES. Chip	1/10W 100 ohm
R7704	J24205471	RES. Chip	1/10W 470 ohm
R7705	J24205471	RES. Chip	1/10W 470 ohm
R7706	J24205221	RES. Chip	1/10W 220 ohm
R7707	J24205222	RES. Chip	1/10W 2.2k ohm
R7708	J24205471	RES. Chip	1/10W 470 ohm
R7709	J24205473	RES. Chip	1/10W 47k ohm
R7710	J24205221	RES. Chip	1/10W 220 ohm
R7711	J24205222	RES. Chip	1/10W 2.2k ohm
R7712	J24205000	RES. Chip	1/10W 0 ohm
R7713	J24205101	RES. Chip	1/10W 100 ohm
R7714	J01225104	Carbon Film RES.	1/6W 100k ohm
C7701	K22170305	CAP. Chip	UJ 50WV 4pF
C7702	K22170307	CAP. Chip	UJ 50WV 6pF
C7703	K22170304	CAP. Chip	UJ 50WV 3pF
C7704	K22170211	CAP. Chip	CH 50WV 10pF
C7705	K22170309	CAP. Chip	UJ 50WV 8pF
C7706	K22170319	CAP. Chip	UJ 50WV 22p
C7707	K22170805	CAP. Chip	B 50WV 0.001u
C7708	K40109015	AL. Electro. CAP.	10WV 100u
C7709	K22170813	CAP. Chip	B 50WV 0.0047u
C7710	K22170202	CAP. Chip	CH 50WV 1p
C7711	K22171004	CAP. Chip	F 50WV 0.01u
C7712	K40109015	AL. Electro. CAP.	10WV 100u
C7713	K22170813	CAP. Chip	B 50WV 0.0047u
C7714	K22170813	CAP. Chip	B 50WV 0.0047u
C7715	K22171004	CAP. Chip	F 50WV 0.01u
C7716	K22141809	CAP. Chip	B 25WV 0.1u
C7717	K22170813	CAP. Chip	B 50WV 0.0047u
C7718	K22170813	CAP. Chip	B 50WV 0.0047u
C7719	K22170805	CAP. Chip	B 50WV 0.001u
C7720	K22171004	CAP. Chip	F 50WV 0.01u
C7721	K78120009	Tantalum CAP. Chip	16WV 1u
C7722	K78140009	Tantalum CAP. Chip	25WV 0.47u
C7724	K22141809	CAP. Chip	B 25WV 0.1u
TC7701	K91000114	Variable CAP.	6pF
T7701	L0021358	Coil	
L7702	L1190348	M.RFC	
	Q5000057	Lead Frame	

PLL IC UNIT

Symbol No.	Part No.	Description	Device
	F2919102	Printed Circuit Board	
	C029192AA	PCB with Components	
Q7601	G1090582	IC	JLC1007P
Q7602	G1090829	IC	MB503
D7601	G2090185	Diode	HZ5C2
R7601	J24205222	RES. Chip	1/10W 2.2k ohm
R7602	J24205103	RES. Chip	1/10W 10k ohm
R7603	J24205103	RES. Chip	1/10W 10k ohm
R7604	J24205221	RES. Chip	1/10W 220 ohm
C7601	K22171004	CAP. Chip	F 50WV 0.01u
C7602	K22170813	CAP. Chip	B 50WV 0.0047u
C7603	K22171004	CAP. Chip	F 50WV 0.01u
C7604	K40129012	AL. Electro. CAP.	16WV 10u
C7605	K22171004	CAP. Chip	F 50WV 0.01u
C7606	K22141809	CAP. Chip	B 25WV 0.1u
	Q5000057	Lead Frame	

430MHz PLL UNIT

Symbol No.	Part No.	Description	Device
	F2888103A	Printed Circuit Board	
	C028883AA	PCB with Components: Vers. A1,A2 w/o 430MHz SHIFT UNIT,	
	C028883AB	PCB with Components: Vers.B1,B2,B3 w/o 430MHz SHIFT UNIT,	
	C028883AC	PCB with Components: Vers.C1,C2,C3 w/o 430MHz SHIFT UNIT,	
	C028883AD	PCB with Components: Vers. F w/o 430MHz SHIFT UNIT,	

	C028883AE	PCB with Components: Vers.H1,H2,H3 w/o 430MHz SHIFT UNIT,		
	C028883AF	PCB with Components: Vers. A1,A2 w/ 430MHz SHIFT UNIT,		
	C028883AG	PCB with Components: Vers.B1,B2,B3 w/ 430MHz SHIFT UNIT,		
	C028883AH	PCB with Components: Vers.C1,C2,C3 w/ 430MHz SHIFT UNIT,		
	C028883AJ	PCB with Components: Vers. F w/ 430MHz SHIFT UNIT,		
	C028883AK	PCB with Components: Vers.H1,H2,H3 w/ 430MHz SHIFT UNIT,		
8001	G3805070F	FET	2SK705F	
8002	G3333550	Transistor	2SC3355	
8003	G1090795	IC	MB504	
8004	G1090707	IC	MC145156P	
8005	G1090796	IC	MB505-16	
8006	G1090247	IC	TC9122P	
8007	G3304580C	Transistor	2SC458C	
8008	G1090473	IC	TC5081AP	
8009	G3305350B	Transistor	2SC535B	
8010	G3802410G	FET	2SK241GR	
8011	G3304580C	Transistor	2SC458C	
8012	G3305350B	Transistor	2SC535B	
8013	G3324071	Transistor	2SC2407A	
8014	G3305350B	Transistor	2SC535B	
8015	G1090084	IC	uPC78L05	
8001	G2090180	Diode	FC53M-5	
8002	G2090180	Diode	FC53M-5	
8003	G2090180	Diode	FC53M-5	
8004		See Model Chart		
8005		See Model Chart		
8006		See Model Chart		
8007		See Model Chart		
8008		See Model Chart		
8010		See Model Chart		
8011		See Model Chart		
8012	G2090384	Diode	HZ7C2	
8001	H0102818	XTAL	HC-49T 61.46833MHZ	
8001	J01225561	Carbon Film RES.	1/6W 560 ohm	PJ
8002	J01225471	Carbon Film RES.	1/6W 470 ohm	PJ
8003	J01225102	Carbon Film RES.	1/6W 1k ohm	PJ
8004	J02225222	Carbon Film RES.	1/6W 2.2k ohm	UJ
8005	J01225330	Carbon Film RES.	1/6W 33 ohm	PJ
8006	J02225221	Carbon Film RES.	1/6W 220 ohm	UJ
8007	J02225332	Carbon Film RES.	1/6W 3.3k ohm	UJ
8008	J01225103	Carbon Film RES.	1/6W 10k ohm	PJ
8009	J02225101	Carbon Film RES.	1/6W 100 ohm	UJ
8010	J02225101	Carbon Film RES.	1/6W 100 ohm	UJ
8011	J02225560	Carbon Film RES.	1/6W 56 ohm	UJ
8012	J01225222	Carbon Film RES.	1/6W 2.2k ohm	PJ
8013	J02225560	Carbon Film RES.	1/6W 56 ohm	UJ
8014	J02225222	Carbon Film RES.	1/6W 2.2k ohm	UJ
8015	J02225104	Carbon Film RES.	1/6W 100k ohm	UJ
8016	J02225471	Carbon Film RES.	1/6W 470 ohm	UJ
8017	J01225101	Carbon Film RES.	1/6W 100 ohm	PJ
8018	J01225560	Carbon Film RES.	1/6W 56 ohm	PJ
8019	J02225331	Carbon Film RES.	1/6W 330 ohm	UJ
8020	J02225682	Carbon Film RES.	1/6W 6.8k ohm	UJ
8021	J02225223	Carbon Film RES.	1/6W 22k ohm	UJ
8022	J02225560	Carbon Film RES.	1/6W 56 ohm	UJ
8023	J02225471	Carbon Film RES.	1/6W 470 ohm	UJ
8024	J02225471	Carbon Film RES.	1/6W 470 ohm	UJ
8025	J02225223	Carbon Film RES.	1/6W 22k ohm	UJ
8026	J02225682	Carbon Film RES.	1/6W 6.8k ohm	UJ

R8027	J01225470	Carbon Film RES.	1/6W 47 ohm		PJ
R8028	J02225560	Carbon Film RES.	1/6W 56 ohm		UJ
R8030	J02225332	Carbon Film RES.	1/6W 3.3k ohm		UJ
R8031	J02225222	Carbon Film RES.	1/6W 2.2k ohm		UJ
R8032	J02225104	Carbon Film RES.	1/6W 100k ohm		UJ
R8033	J01225472	Carbon Film RES.	1/6W 4.7k ohm		PJ
R8034	J02225223	Carbon Film RES.	1/6W 22k ohm		UJ
R8035	J01225223	Carbon Film RES.	1/6W 22k ohm		PJ
R8036	J02225681	Carbon Film RES.	1/6W 680 ohm		UJ
R8037	J02225103	Carbon Film RES.	1/6W 10k ohm		UJ
R8038	J02225272	Carbon Film RES.	1/6W 2.7k ohm		UJ
R8039	J02225470	Carbon Film RES.	1/6W 47 ohm		UJ
R8040	J01225150	Carbon Film RES.	1/6W 15 ohm		PJ
R8041	J01225820	Carbon Film RES.	1/6W 82 ohm		PJ
R8042	J01225680	Carbon Film RES.	1/6W 68 ohm		PJ
R8043	J01225820	Carbon Film RES.	1/6W 82 ohm		PJ
R8044	J02225101	Carbon Film RES.	1/6W 100 ohm		UJ
R8045	J02225331	Carbon Film RES.	1/6W 330 ohm		UJ
R8046	J02225682	Carbon Film RES.	1/6W 6.8k ohm		UJ
R8047	J02225223	Carbon Film RES.	1/6W 22k ohm		UJ
R8048	J02225150	Carbon Film RES.	1/6W 15 ohm		UJ
R8049	J02225101	Carbon Film RES.	1/6W 100 ohm		UJ
R8050	J02225102	Carbon Film RES.	1/6W 1k ohm		UJ
C8001	K70167474	Tantalum CAP.		35WV	0.47uF
C8002	K19149021	Ceramic CAP.		25WV	0.047uF
C8003	K12171102	Ceramic CAP.	E	50WV	0.001uF
C8004	K05175150	Ceramic CAP.	RH	50WV	15pH
C8005	K12171102	Ceramic CAP.	E	50WV	0.001uF
C8006	K40109001	AL. Electro. CAP.		10WV	100uF
C8007	K02175120	Ceramic CAP.	CH	50WV	12pF
C8008	K05173080	Ceramic CAP.	RH	50WV	8pF
C8009	K02172C59	Ceramic CAP.	CK	50WV	0.5pF
C8010	K13179014	Ceramic CAP.	F	50WV	0.0047uF
C8011	K13179014	Ceramic CAP.	F	50WV	0.0047uF
C8012	K00172020	Ceramic CAP.	SL	50WV	2pF
C8013	K00173070	Ceramic CAP.	SL	50WV	7pF
C8014	K12171102	Ceramic CAP.	E	50WV	0.001uF
C8015	K13179014	Ceramic CAP.	F	50WV	0.0047uF
C8016	K19149025	Ceramic CAP.		25WV	0.1uF
C8017	K12171102	Ceramic CAP.	E	50WV	0.001uF
C8018	K12171102	Ceramic CAP.	E	50WV	0.001uF
C8019	K40109002	AL. Electro. CAP.		10WV	47uF
C8020	K19149025	Ceramic CAP.		25WV	0.1uF
C8021	K13179008	Ceramic CAP.	F	50WV	0.01uF
C8022	K00175220	Ceramic CAP.	SL	50WV	22pF
C8023	K00175220	Ceramic CAP.	SL	50WV	22pF
C8024	K13179008	Ceramic CAP.	F	50WV	0.01uF
C8025	K00172020	Ceramic CAP.	SL	50WV	2pF
C8026	K00173070	Ceramic CAP.	SL	50WV	7pF
C8027	K12171102	Ceramic CAP.	E	50WV	0.001uF
C8028	K19149025	Ceramic CAP.		25WV	0.1uF
C8029	K13179014	Ceramic CAP.	F	50WV	0.0047uF
C8030	K12171102	Ceramic CAP.	E	50WV	0.001uF
C8031	K12171102	Ceramic CAP.	E	50WV	0.001uF
C8032	K19149025	Ceramic CAP.		25WV	0.1uF
C8033	K19149025	Ceramic CAP.		25WV	0.1uF
C8034	K40109001	AL. Electro. CAP.		10WV	100uF
C8035	K13179014	Ceramic CAP.	F	50WV	0.0047uF
C8036	K13179014	Ceramic CAP.	F	50WV	0.0047uF
C8037	K40129004	AL. Electro. CAP.		16WV	10uF
C8038	K12171102	Ceramic CAP.	E	50WV	0.001uF
C8039	K13179008	Ceramic CAP.	F	50WV	0.01uF
C8040	K13179008	Ceramic CAP.	F	50WV	0.01uF
C8041	K40179011	AL. Electro. CAP.		50WV	3.3uF
C8042	K00173070	Ceramic CAP.	SL	50WV	7pF
C8043	K13179008	Ceramic CAP.	F	50WV	0.01uF
C8044	K00172020	Ceramic CAP.	SL	50WV	2pF
C8045	K13179008	Ceramic CAP.	F	50WV	0.01uF
C8046	K00175470	Ceramic CAP.	SL	50WV	47pF
C8047	K13179014	Ceramic CAP.	F	50WV	0.0047uF
C8048	K00175220	Ceramic CAP.	SL	50WV	2pF
C8049	K19149015	Ceramic CAP.		25WV	0.015uF
C8050	K05172030	Ceramic CAP.	RJ	50WV	3pF
C8051	K05175470	Ceramic CAP.	RH	50WV	47pF
C8052	K05175560	Ceramic CAP.	RH	50WV	56pF
C8053	K13179008	Ceramic CAP.	F	50WV	0.01uF
C8054	K05175150	Ceramic CAP.	RH	50WV	15pF
C8055	K05175470	Ceramic CAP.	RH	50WV	47pF
C8056	K22171004	CAP. Chip	F	50WV	0.01uF
C8057	K13179014	Ceramic CAP.	F	50WV	0.0047uF
C8058	K05172030	Ceramic CAP.	RJ	50WV	3pF

PARTS LIST

C8060	K12171102	Ceramic CAP.	E 50WV 0.001uF
C8061	K13179008	Ceramic CAP.	F 50WV 0.01uF
C8062	K40129004	AL. Electro. CAP.	16WV 10uF
C8063	K13179008	Ceramic CAP.	F 50WV 0.01uF
C8064	K13179008	Ceramic CAP.	F 50WV 0.01uF
C8065	K05175120	Ceramic CAP.	RH 50WV 12pF
C8066	K05172030	Ceramic CAP.	RJ 50WV 3pF
C8067	K13179008	Ceramic CAP.	F 50WV 0.01uF
C8068	K40109002	AL. Electro. CAP.	10WV 47uF
C8069	K12171102	Ceramic CAP.	E 50WV 0.001uF
C8070	K12171102	Ceramic CAP.	E 50WV 0.001uF
C8071	K40179016	AL. Electro. CAP.	50WV 0.1uF
C8072	K70167154	Tantalum CAP.	35WV 0.15uF
C8073	K19149021	Ceramic CAP.	25WV 0.047uF
C8074	K12171102	Ceramic CAP.	E 50WV 0.001uF
C8075	K13179008	Ceramic CAP.	F 50WV 0.01uF
C8076	K22171229	CAP. Chip	CH 50WV 56pF
C8077	K22171229	CAP. Chip	CH 50WV 56pF
C8078	K22171229	CAP. Chip	CH 50WV 56pF
C8079	K22171229	CAP. Chip	CH 50WV 56pF
C8080	K22171229	CAP. Chip	CH 50WV 56pF
C8081	K22171229	CAP. Chip	CH 50WV 56pF
C8082	K22171229	CAP. Chip	CH 50WV 56pF
C8083	K22171229	CAP. Chip	CH 50WV 56pF
C8084	K22171229	CAP. Chip	CH 50WV 56pF
C8085	K22171229	CAP. Chip	CH 50WV 56pF
C8086	K22171229	CAP. Chip	CH 50WV 56pF
C8087	K22171229	CAP. Chip	CH 50WV 56pF
C8088	K22171229	CAP. Chip	CH 50WV 56pF
C8089	K22171229	CAP. Chip	CH 50WV 56pF
C8090	K22171229	CAP. Chip	CH 50WV 56pF
C8091	K22171229	CAP. Chip	CH 50WV 56pF
C8092	K22171229	CAP. Chip	CH 50WV 56pF
T8001	L0021358	Coil	
T8002	L0020907	Coil	
L8001	L0020852	Coil	
L8002	L1190242	M.RFC	0.47uH
L8003	L0021520	Coil	
L8004	L0190138	Coil	
L8005	L1190242	M.RFC	0.47uH
L8006	L1190242	M.RFC	0.47uH
L8007	L1190270	M.RFC	100uH
L8008	L1190270	M.RFC	100uH
L8009	L1190252	M.RFC	3.3uH
L8010	L1190246	M.RFC	1uH
L8011	L0021359	Coil	
L8012	L0021359	Coil	
L8013	L1190270	M.RFC	100uH
L8014	L1190035	M.RFC	3.9mH
L8015	L1190246	M.RFC	1uH
L8016	L0021205	Coil	0.7uH
L8017	L1190244	M.RFC	0.68uH
L8018	L1020673	RFC	
L8019	L0021359	Coil	
CV8001	L4020086	Helical Resonator	
FB8001	L9190001	Ferrite Beads	
FB8002	L9190001	Ferrite Beads	
J8001	P1090210	Connector	
J8002	P0090532	Connector	
J8003	P0090530	Connector	
TP8001	Q5000036	TP-G	MK-1095
	R0122640	Shield Plate	
	R0123550	Leaf Spring	
	R0121430	Leaf Spring	
	R0121340	Leaf Spring	
	R0062770B	VCO Case A	
	R0062780A	VCO Case Lid	
	R0056640	PLL IF Shield	
	R0510870B	Shield Case	

430MHz SHIFT UNIT

Symbol No.	Part No.	Description	Device
	F2892108	Printed Circuit Board	
	C028928AA	PCB with Components	

Q9201	G3327127G	Transistor	2SC2712GR-TE85R
Q9202	G3327127G	Transistor	2SC2712GR-TE85R
Q9203	G3327127G	Transistor	2SC2712GR-TE85R
Q9204	G3327127G	Transistor	2SC2712GR-TE85R
Q9205	G3327127G	Transistor	2SC2712GR-TE85R
Q9206	G3327127G	Transistor	2SC2712GR-TE85R
R9201	J24205473	RES. Chip	1/10W 47k ohm
R9202	J24205473	RES. Chip	1/10W 47k ohm
R9203	J24205473	RES. Chip	1/10W 47k ohm
R9204	J24205222	RES. Chip	1/10W 2.2k ohm
R9205	J24205222	RES. Chip	1/10W 2.2k ohm
R9206	J24205222	RES. Chip	1/10W 2.2k ohm
R9207	J24205473	RES. Chip	1/10W 47k ohm
R9208	J24205473	RES. Chip	1/10W 47k ohm
R9209	J24205473	RES. Chip	1/10W 47k ohm
R9210	J24205222	RES. Chip	1/10W 2.2k ohm
R9211	J24205222	RES. Chip	1/10W 2.2k ohm
R9212	J24205222	RES. Chip	1/10W 2.2k ohm
R9213	J24205000	RES. Chip	1/10W 0 ohm
C9201	K22170235	CAP. Chip	CH 50WV 100p
C9202	K22170235	CAP. Chip	CH 50WV 100p
C9203	K22170235	CAP. Chip	CH 50WV 100p
C9204	K22170235	CAP. Chip	CH 50WV 100p
C9205	K22170235	CAP. Chip	CH 50WV 100p
C9206	K22170235	CAP. Chip	CH 50WV 100p
	Q5000057	Lead Frame	

430MHz FRONT UNIT

Symbol No.	Part No.	Description	Device
	F2929101A	Printed Circuit Board	
	C029291AA	PCB with Components	
Q7801	G4801640O	FET	3SK164O
Q7802	G4801640O	FET	3SK164O
R7801	J24205223	RES. Chip	1/10W 22k ohm
R7802	J24205682	RES. Chip	1/10W 6.8k ohm
R7803	J24205183	RES. Chip	1/10W 18k ohm
R7804	J24205680	RES. Chip	1/10W 68 ohm
R7805	J24205102	RES. Chip	1/10W 1k ohm
R7806	J24205101	RES. Chip	1/10W 100 ohm
R7808	J24205000	RES. Chip	1/10W 0 ohm
R7810	J24205680	RES. Chip	1/10W 68 ohm
R7811	J24205392	RES. Chip	1/10W 3.9k ohm
R7812	J24205101	RES. Chip	1/10W 100 ohm
R7814	J24205331	RES. Chip	1/10W 330 ohm
C7801	K22170227	CAP. Chip	CH 50WV 47p
C7802	K22170805	CAP. Chip	B 50WV 0.001u
C7803	K22170805	CAP. Chip	B 50WV 0.001u
C7804	K22170204	CAP. Chip	CH 50WV 3p
C7805	K22170235	CAP. Chip	CH 50WV 100p
C7806	K22170805	CAP. Chip	B 50WV 0.001u
C7807	K22170205	CAP. Chip	CH 50WV 4p
C7808	K22170206	CAP. Chip	CH 50WV 5p
C7809	K22171004	CAP. Chip	F 50WV 0.01u
C7810	K22171004	CAP. Chip	F 50WV 0.01u
C7812	K22171004	CAP. Chip	F 50WV 0.01u
C7813	K22170805	CAP. Chip	B 50WV 0.001u
C7814	K22170202	CAP. Chip	CH 50WV 1p
TC7801	K91000060	Variable CAP.	2pF
T7801	L0021740	Coil	
L7801	L0020900	Coil	
L7802	L0020852	Coil	
L7803	L0020852	Coil	
L7804	L0020852	Coil	
CV7801	L4020081	Helical Resonator	
J7801	P1090210	Connector	
J7802	P1090210	Connector	
J7803	P1090210	Connector	
	Q5000016	TP-E	MS-60124
	R0110610	Spring Board	
	R0123610	Shield Case	

PARTS LIST

	R0123630	Shield Cover	
	R0056651	PLL IF Shield Lid	

430MHz PA UNIT

ymbol No.	Part No.	Description	Device
	F2887105	Printed Circuit Board	
	C028875AA	PCB with Components: 10W Model	
	C028875AB	PCB with Components: 25W Model	
7501(10W)	G1090858	IC	M57716
7501(25W)	G1090790	IC	M57745
7501	G2090377	Diode	MI308
7502	G2090377	Diode	MI308
7503	G2090377	Diode	MI308
7504	G2090118	Diode	1SS97
7505	G2090118	Diode	1SS97
7506(25W)	G2090377	Diode	MI308
7501	J31309002	RES.	1W 0.1 ohm
7502(25W)	J31309002	RES.	1W 0.1 ohm
7503	J01275151	Carbon Film RES.	1/2W 150 ohm TJ
7504	J02245103	Carbon Film RES.	1/4W 10k ohm SJ
7505	J02245103	Carbon Film RES.	1/4W 10k ohm SJ
7506(10W)	J01225101	Carbon Film RES.	1/6W 100 ohm PJ
7507(10W)	J01225680	Carbon Film RES.	1/6W 68 ohm PJ
7508(10W)	J01225680	Carbon Film RES.	1/6W 100 ohm PJ
7502	K10176102	Ceramic CAP.	B 50WV 0.001uF
7503	K13179008	Ceramic CAP.	F 50WV 0.01uF
7504	K40129004	AL. Electro. CAP.	16WV 10uF
7605	K10176102	Ceramic CAP.	B 50WV 0.00uF
7606	K13179008	Ceramic CAP.	F 50WV 0.01uF
7607	K40129004	AL. Electro. CAP.	16WV 10uF
7608	K10176102	Ceramic CAP.	B 50WV 0.001uF
7609	K13178008	Ceramic CAP.	F 50WV 0.01uF
7510	K40129004	AL. Electro. CAP.	16WV 10uF
7511	K02172050	Ceramic CAP.	CH 50WV 5pF
7513	K02173080	Ceramic CAP.	CH 50WV 8pF
7514	K02179001	Ceramic CAP.	CK 50WV 1pF
7516(10W)	K02173060	Ceramic CAP.	CH 50WV 6pF
7516(25W)	K02172040	Ceramic CAP.	CH 50WV 4pF
7517	K02179001	Ceramic CAP.	CK 50WV 1pF
7518	K02172030	Ceramic CAP.	CJ 50WV 3pF
7519	K02173060	Ceramic CAP.	CH 50WV 6pF
7520	K02173060	Ceramic CAP.	CH 50WV 6pF
7521	K02172030	Ceramic CAP.	CJ 50WV 3pF
7522	K02172040	Ceramic CAP.	CH 50WV 4pF
7523(10W)	K02173080	Ceramic CAP.	CH 50WV 8pF
7523(25W)	K02173100	Ceramic CAP.	CH 50WV 10pF
7524(10W)	K02173080	Ceramic CAP.	CH 50WV 8pF
7524(25W)	K02173100	Ceramic CAP.	CH 50WV 10pF
7525	K02173060	Ceramic CAP.	CH 50WV 6pF
7526	K02179001	Ceramic CAP.	CK 50WV 1pF
7527	K10176102	Ceramic CAP.	B 50WV 0.001uF
7528	K10176102	Ceramic CAP.	B 50WV 0.001uF
7529	K10176102	Ceramic CAP.	B 50WV 0.001uF
7530	K10176102	Ceramic CAP.	B 50WV 0.001uF
7531	K10176102	Ceramic CAP.	B 50WV 0.001uF
7532	K10176102	Ceramic CAP.	B 50WV 0.001uF
7501	L1020469	RFC	
7502	L1020469	RFC	
7503	L1020663	RFC	
7504	L0020840	Coil	
7505	L0020840	Coil	
7506	L0020901	Coil	
7507	L0020901	Coil	
7508	L0020840	Coil	
7509	L0020840	Coil	
7510	L1190246	M.RFC	1uH
7511	L1190246	M.RFC	1uH
	Q5000036	TP-G	MK-1095
	Q6000001	Terminal Strip	(10W Model)
	R6047250	Booster Speacer	

	S6000138	Beads	(25W Model)

CNTL UNIT

Symbol No.	Part No.	Description	Device
	F2891000B	Printed Circuit Board	
	C028910AA	PCB with Components (w/o BURST Tone)	
	C028910AB	PCB with Components* (w/1750Hz BURST Tone)	
	C028910AC	PCB with Components° (w/1800Hz BURST Tone)	
Q1001	G3406670C	Transistor	2SD667C
Q1002	G3313840R	Transistor	2SC1384R
Q1003	G1090299	IC	uPC7805H
Q1004	G3304580C	Transistor	2SC458C
Q1005	G3304580C	Transistor	2SC458C
Q1006	G3304580C	Transistor	2SC458C
Q1007	G1090878	IC	HM6264ALP-12
Q1008	G1090792	IC	HD63A01Y0
Q1009	G3304580C	Transistor	2SC458C
Q1010	G3090079	Transistor	BA1A4P
Q1011	G1090126	IC	MC14069UBCP
Q1012	G1090126	IC	MC14069UBCP
Q1013	G1090067	IC	MC14013BCP
Q1014	G1090068	IC	MC14011BCP
Q1015	G1090053	IC	MC14081BCP
Q1016	G3090079	Transistor	BA1A4P
Q1017	G3090079	Transistor	BA1A4P
Q1018	G3090079	Transistor	BA1A4P
Q1019	G1090128	IC	MC14556BCP
Q1020	G1090309	IC	MC14555BCP
Q1021	G1090257	IC	MC14066BCP
Q1022	G3304580C	Transistor	2SC458C
Q1023	G3304580C	Transistor	2SC458C
Q1024	G1090794	IC	HD63A21P
Q1025	G1090794	IC	HD63A21P
Q1026	G3090079	Transistor	BA1A4P
Q1029	G1090671	IC	uPD6302CA
Q1030	G1090027	IC	MC14001BCP
Q1031*°	G3304580C	Transistor	2SC458C
Q1032*°	G3304580C	Transistor	2SC458C
Q1033*°	G1090239	IC	TC5082P-G
Q1034*°	G3090075	Transistor	BN1A4P
Q1035	G1090646	IC	LA6324
Q1036	G3090079	Transistor	BA1A4P
Q1037	G3090079	Transistor	BA1A4P
Q1038	G3090079	Transistor	BA1A4P
Q1039	G3090079	Transistor	BA1A4P
Q1040	G3090079	Transistor	BA1A4P
Q1041	G3090079	Transistor	BA1A4P
Q1042	G3090079	Transistor	BA1A4P
Q1043	G3090079	Transistor	BA1A4P
Q1044	G3090079	Transistor	BA1A4P
Q1045	G1090492	IC	MC14072BCP
Q1046	G3107331Q	Transistor	2SA733AQ
Q1047	G1090793	IC	HD74HC139P
Q1048	G3090081	Transistor	BN1A4M
Q1049	G3090074	Transistor	BA1A4M
Q1051	G3090082	Transistor	BN1L4L
Q1052*°	G3304580C	Transistor	2SC458C
D1001	G2090338	Diode	1SS81
D1002	G2090185	Diode	HZ5C2
D1003	G2090306	Diode	10E1
D1004	G2090149	Diode	HZ12B2
D1005	G2090408	Diode	1SS270
D1007	G2090408	Diode	1SS270
D1008	G2090408	Diode	1SS270
D1009	G2090408	Diode	1SS270
D1010	G2090408	Diode	1SS270
D1011	G2090408	Diode	1SS270
D1012*°	G2090408	Diode	1SS270
D1013	G2090386	Diode	HZ33-1
D1015	G2090385	Diode	HZ9C2
D1016*°	G2090408	Diode	1SS270
D1017	G2090408	Diode	1SS270

PARTS LIST

X1001	H0102811	XTAL	HC-49/T	5.5296MHz	
X1002	H0102549	XTAL	HC-49/U	3.6864MHz	
X1003*	H0101982	XTAL	HC-18/T	7.168MHz	
X1003°	H0101983	XTAL	HC-18/T	7.3728MHz	
R1001	J01275479	Carbon Film RES.	1/2W	4.7 ohm	TJ
R1002	J02225101	Carbon Film RES.	1/6W	100 ohm	UJ
R1003	J02225222	Carbon Film RES.	1/6W	2.2k ohm	UJ
R1004	J02225101	Carbon Film RES.	1/6W	100 ohm	UJ
R1006	J02225222	Carbon Film RES.	1/6W	2.2k ohm	UJ
R1007	J02225221	Carbon Film RES.	1/6W	220 ohm	UJ
R1008	J02225473	Carbon Film RES.	1/6W	47k ohm	UJ
R1009	J02225472	Carbon Film RES.	1/6W	4.7k ohm	UJ
R1010	J02225472	Carbon Film RES.	1/6W	4.7k ohm	UJ
R1011	J02225223	Carbon Film RES.	1/6W	22k ohm	UJ
R1012	J02225472	Carbon Film RES.	1/6W	4.7k ohm	UJ
R1013	J02225472	Carbon Film RES.	1/6W	4.7k ohm	UJ
R1014	J02225103	Carbon Film RES.	1/6W	10k ohm	UJ
R1016	J02225472	Carbon Film RES.	1/6W	4.7k ohm	UJ
R1017	J40900163	Block RES.	1/8W	10k ohm	
R1018	J02225472	Carbon Film RES.	1/6W	4.7k ohm	UJ
R1019	J02225103	Carbon Film RES.	1/6W	10k ohm	UJ
R1020	J02225103	Carbon Film RES.	1/6W	10k ohm	UJ
R1021	J02225333	Carbon Film RES.	1/6W	33k ohm	UJ
R1022	J02225333	Carbon Film RES.	1/6W	33k ohm	UJ
R1023	J02225333	Carbon Film RES.	1/6W	33k ohm	UJ
R1024	J02225333	Carbon Film RES.	1/6W	33k ohm	UJ
R1025	J02225104	Carbon Film RES.	1/6W	100k ohm	UJ
R1026	J02225104	Carbon Film RES.	1/6W	100k ohm	UJ
R1027	J02225104	Carbon Film RES.	1/6W	100k ohm	UJ
R1028	J02225104	Carbon Film RES.	1/6W	100k ohm	UJ
R1029	J02225334	Carbon Film RES.	1/6W	330k ohm	UJ
R1030	J02225334	Carbon Film RES.	1/6W	330k ohm	UJ
R1031	J02225334	Carbon Film RES.	1/6W	330k ohm	UJ
R1032	J02225334	Carbon Film RES.	1/6W	330k ohm	UJ
R1033	J02225473	Carbon Film RES.	1/6W	47k ohm	UJ
R1034	J02225823	Carbon Film RES.	1/6W	82k ohm	UJ
R1035	J02225823	Carbon Film RES.	1/6W	82k ohm	UJ
R1036	J02225823	Carbon Film RES.	1/6W	82k ohm	UJ
R1037	J02225823	Carbon Film RES.	1/6W	82k ohm	UJ
R1038	J40900031	Block RES.	1/8W	4.7k ohm	
R1039	J02225103	Carbon Film RES.	1/6W	10k ohm	UJ
R1040	J40900165	Block RES.	1/8W	10k ohm	
R1041	J02225103	Carbon Film RES.	1/6W	10k ohm	UJ
R1042	J02225104	Carbon Film RES.	1/6W	100k ohm	UJ
R1043	J02225472	Carbon Film RES.	1/6W	4.7k ohm	UJ
R1044	J02225222	Carbon Film RES.	1/6W	2.2k ohm	UJ
R1045	J02225331	Carbon Film RES.	1/6W	330 ohm	UJ
R1046	J02225472	Carbon Film RES.	1/6W	4.7k ohm	UJ
R1047	J02225681	Carbon Film RES.	1/6W	680 ohm	UJ
R1048	J40900035	Block RES.	1/8W	10k ohm	
R1049	J02225472	Carbon Film RES.	1/6W	4.7k ohm	UJ
R1050	J40900164	Block RES.	1/8W	10k ohm	
R1052	J02225473	Carbon Film RES.	1/6W	47k ohm	UJ
R1053	J02225273	Carbon Film RES.	1/6W	27k ohm	UJ
R1054	J02225104	Carbon Film RES.	1/6W	100k ohm	UJ
R1057	J02225103	Carbon Film RES.	1/6W	10k ohm	UJ
R1058	J02225104	Carbon Film RES.	1/6W	100k ohm	UJ
R1059	J02225124	Carbon Film RES.	1/6W	120k ohm	UJ
R1060*°	J02225473	Carbon Film RES.	1/6W	47k ohm	UJ
R1061*°	J02225473	Carbon Film RES.	1/6W	47k ohm	UJ
R1062*°	J02225105	Carbon Film RES.	1/6W	1M ohm	UJ
R1063*°	J02225223	Carbon Film RES.	1/6W	22k ohm	UJ
R1064*°	J02225103	Carbon Film RES.	1/6W	10k ohm	UJ
R1066*°	J01225274	Carbon Film RES.	1/6W	270k ohm	PJ
R1067*°	J02225332	Carbon Film RES.	1/6W	3.3k ohm	UJ
R1068*°	J02225222	Carbon Film RES.	1/6W	2.2k ohm	UJ
R1069	J02225224	Carbon Film RES.	1/6W	220k ohm	UJ
R1070	J02225102	Carbon Film RES.	1/6W	1k ohm	UJ
R1071	J02225104	Carbon Film RES.	1/6W	100k ohm	UJ
R1072	J02225683	Carbon Film RES.	1/6W	68k ohm	UJ
R1073	J02225683	Carbon Film RES.	1/6W	68k ohm	UJ
R1074	J02225103	Carbon Film RES.	1/6W	10k ohm	UJ
R1075	J02225332	Carbon Film RES.	1/6W	3.3k ohm	UJ
R1076	J02225104	Carbon Film RES.	1/6W	100k ohm	UJ
R1077	J02225103	Carbon Film RES.	1/6W	10k ohm	UJ
R1078	J02225472	Carbon Film RES.	1/6W	4.7k ohm	UJ
R1079	J02225472	Carbon Film RES.	1/6W	4.7k ohm	UJ
R1080	J02225154	Carbon Film RES.	1/6W	150k ohm	UJ
R1081	J02225155	Carbon Film RES.	1/6W	1.5M ohm	UJ
R1082	J02225473	Carbon Film RES.	1/6W	47k ohm	UJ
R1083	J02225104	Carbon Film RES.	1/6W	100k ohm	UJ
R1084	J02225332	Carbon Film RES.	1/6W	3.3k ohm	UJ
R1085	J02225103	Carbon Film RES.	1/6W	10k ohm	UJ
R1086	J02225332	Carbon Film RES.	1/6W	3.3k ohm	UJ
R1087	J02225103	Carbon Film RES.	1/6W	10k ohm	UJ
R1088	J02225473	Carbon Film RES.	1/6W	47k ohm	UJ

R1089	J01225333	Carbon Film RES.	1/6W	33k ohm	U
R1091	J02225103	Carbon Film RES.	1/6W	10k ohm	U
R1092	J02225105	Carbon Film RES.	1/6W	1M ohm	U
R1093	J02225223	Carbon Film RES.	1/6W	22k ohm	U
R1094*°	J02225104	Carbon Film RES.	1/6W	100k ohm	U
C1001	K40129043	AL. Electro. CAP.		16WV	330u
C1002	K40129043	AL. Electro. CAP.		16WV	330u
C1003	K40129008	AL. Electro. CAP.		16WV	33u
C1004	K40129043	AL. Electro. CAP.		16WV	330u
C1005	K19149021	Ceramic CAP.		25WV	0.047u
C1006	K19149013	Ceramic CAP.		25WV	0.01u
C1007	K40179014	AL. Electro. CAP.		50WV	10u
C1008	K13179008	Ceramic CAP.	F	50WV	0.01u
C1009	K40129004	AL. Electro. CAP.		16WV	10u
C1010	K12171102	Ceramic CAP.	E	50WV	0.001u
C1011	K40129049	AL. Electro. CAP.		16WV	470u
C1012	K40149001	AL. Electro. CAP.		25WV	4.7u
C1013	K40109001	AL. Electro. CAP.		10WV	100u
C1014	K19149021	Ceramic CAP.		25WV	0.047u
C1015	K70107475	Tantalum CAP.		10WV	4.7u
C1016	K12171102	Ceramic CAP.	E	50WV	0.001u
C1017	K40129004	AL. Electro. CAP.		16WV	10u
C1018	K19149021	Ceramic CAP.		25WV	0.0047u
C1019	K00175150	Ceramic CAP.	SL	50WV	15p
C1020	K00175150	Ceramic CAP.	SL	50WV	15p
C1022	K00175101	Ceramic CAP.	SL	50WV	100p
C1023	K19149001	Ceramic CAP.		25WV	0.001u
C1024	K19149001	Ceramic CAP.		25WV	0.001u
C1025	K00175101	Ceramic CAP.	SL	50WV	100p
C1026	K00175101	Ceramic CAP.	SL	50WV	100p
C1027	K19149001	Ceramic CAP.		25WV	0.001u
C1028	K19149001	Ceramic CAP.		25WV	0.001u
C1029	K19149001	Ceramic CAP.		25WV	0.001u
C1030	K19149001	Ceramic CAP.		25WV	0.001u
C1031	K19149021	Ceramic CAP.		25WV	0.047u
C1032	K00175470	Ceramic CAP.	SL	25WV	47p
C1033	K19149021	Ceramic CAP.		25WV	0.047u
C1034	K19149021	Ceramic CAP.		25WV	0.047u
C1035	K00175330	Ceramic CAP.	SL	50WV	33p
C1036	K00175330	Ceramic CAP.	SL	50WV	33p
C1037	K70167105	Tantalum CAP.		35WV	1u
C1038	K19149005	Ceramic CAP.		25WV	0.0022u
C1039	K19149013	Ceramic CAP.		25WV	0.01u
C1040	K19149021	Ceramic CAP.		25WV	0.047u
C1041	K19149021	Ceramic CAP.		25WV	0.047u
C1042	K40179013	AL. Electro. CAP.		50WV	1u
C1043*°	K70147105	Tantalum CAP.		25WV	1u
C1044	K19149021	Ceramic CAP.		25WV	0.047u
C1045*°	K12171102	Ceramic CAP.	E	50WV	0.001u
C1046*°	K00175330	Ceramic CAP.	SL	50WV	33p
C1047*°	K00175330	Ceramic CAP.	SL	50WV	33p
C1048*°	K19149013	Ceramic CAP.		25WV	0.01u
C1049*°	K19149013	Ceramic CAP.		25WV	0.01u
C1050*°	K19149021	Ceramic CAP.		25WV	0.047u
C1051*°	K40129004	AL. Electro. CAP.		16WV	10u
C1052	K19149023	Ceramic CAP.		25WV	0.068u
C1053	K19149013	Ceramic CAP.		25WV	0.01u
C1054	K40179016	AL. Electro. CAP.		50WV	0.1u
C1055	K19149013	Ceramic CAP.		25WV	0.01u
C1056	K00175101	Ceramic CAP.	SL	50WV	100p
C1057	K40129004	AL. Electro. CAP.		16WV	10u
C1058	K40129004	AL. Electro. CAP.		16WV	10u
C1059	K12171102	Ceramic CAP.	E	50WV	0.001u
C1060	K70167474	Tantalum CAP.		35WV	0.47u
C1061	K12171102	Ceramic CAP.		25WV	0.001u
C1062	K19149001	Ceramic CAP.		25WV	0.001u
C1063	K19149001	Ceramic CAP.		25WV	0.001u
C1064	K70137225	Tantalum CAP.		20WV	2.2u
C1066	K19149005	Ceramic CAP.		25WV	0.0022u
C1067	K22170227	CAP. Chip	CH	50WV	47p
C1068	K22170227	CAP. Chip	CH	50WV	47p

PARTS LIST

1001	L3030125	Trans	MPS-162
Z1001	M4290004A	Buzzer	PZS-22K
1001	N6090051	Slide Switch	SSS-212229
1002	N6090051	Slide Switch	SSS-212229
1001	P0090527	Connector	
1002	P0090535	Connector	
1003	P0090531	Connector	
1004	P0090527	Connector	
1005	P0090532	Connector	
1006	P0090532	Connector	
1007	P0090532	Connector	
1008	P0090532	Connector	
1009	P0090524	Connector	
1010	P0090193	Connector	
1011	P0090525	Connector	
1012	P0090525	Connector	
1013	P0090534	Connector	
1014	P0090531	Connector	
1015	P0090525	Connector	
1016	P0090527	Connector	
1017	P0090524	Connector	
1018	P0090525	Connector	
1019	P1090250	Connector	
1020	P1090419	Connector	
AT1001	Q9000385	Lithum Battery	CR2032
	R0087404A	AF Heatsink	
	R0102810	Nut Board	
	R7118700	Fiber	

DISPLAY UNIT

ymbol No.	Part No.	Description	Device
	F2889101A	Printed Circuit Board	
	C028891AB	PCB with Components	
2001	G1090857	IC	HD614022FH35
2002	G3090079	Transistor	BA1A4P
2003	G3090079	Transistor	BA1A4P
2004	G3090079	Transistor	BA1A4P
2005	G1090508	IC	LR4087
2006	G3090075	Transistor	BN1A4P
2001	G2090267	LED	SG-238D
2002	G2090267	LED	SG-238D
2003	G2090267	LED	SG-238D
2004	G2090267	LED	SG-238D
2007	G2090362	LED	LT-9002D
2008	G2090363	LED	LT-9002N
2010	G2090408	Diode	1SS270
2011	G2090408	Diode	1SS270
2012	G2090408	Diode	1SS270
2013	G2090408	Diode	1SS270
2014	G2090408	Diode	1SS270
2015	G2090408	Diode	1SS270
2016	G2090408	Diode	1SS270
S2001	G6090063	FCD	FIP13EN8
2001	H7900380	Ceramic OSC	CST4.00-MG
2002	H7900390	Ceramic OSC	CST3.58-MG
2001	J01225821	Carbon Film RES.	1/6W 820 ohm PJ
R2002	J01225821	Carbon Film RES.	1/6W 820 ohm PJ
R2003	J01225821	Carbon Film RES.	1/6W 820 ohm PJ
R2004	J01225821	Carbon Film RES.	1/6W 820 ohm PJ
R2009	J02225681	Carbon Film RES.	1/6W 680 ohm UJ
R2010	J02225681	Carbon Film RES.	1/6W 680 ohm UJ
R2011	J02225151	Carbon Film RES.	1/6W 150 ohm UJ
R2012	J02225561	Carbon Film RES.	1/6W 560 ohm UJ
R2013	J02225561	Carbon Film RES.	1/6W 560 ohm UJ
R2014	J02225121	Carbon Film RES.	1/6W 120 ohm UJ
R2016	J01225473	Carbon Film RES.	1/6W 47k ohm PJ
R2017	J02225102	Carbon Film RES.	1/6W 1k ohm UJ
R2018	J02225222	Carbon Film RES.	1/6W 2.2k ohm UJ
R2019	J02225104	Carbon Film RES.	1/6W 100k ohm UJ
R2020	J02225472	Carbon Film RES.	1/6W 4.7k ohm UJ
C2001	K19149021	Ceramic CAP.	25WV 0.047uF
C2002	K70127225	Tantalum CAP.	16WV 2.2uF
C2004	K12171102	Ceramic CAP.	E 50WV 0.001uF
C2005	K19149013	Ceramic CAP.	25WV 0.01uF
C2007	K12171102	Ceramic CAP.	E 50WV 0.001uF
C2008	K70167474	Tantalum CAP.	35WV 0.47uF
S2001	N5090028	Tact Switch	
S2002	N5090028	Tact Switch	
S2003	N5090028	Tact Switch	
S2004	N5090028	Tact Switch	
S2005	N5090028	Tact Switch	
S2006	N5090028	Tact Switch	
S2007	N5090028	Tact Switch	
S2008	N5090028	Tact Switch	
S2009	N5090028	Tact Switch	
S2010	N5090028	Tact Switch	
S2011	N5090028	Tact Switch	
S2012	N5090028	Tact Switch	
S2013	N5090028	Tact Switch	
S2014	N5090028	Tact Switch	
S2015	N5090028	Tact Switch	
S2016	N5090028	Tact Switch	
S2017	N5090028	Tact Switch	
S2018	N5090028	Tact Switch	
S2019	N5090028	Tact Switch	
S2020	N5090028	Tact Switch	
S2021	N5090028	Tact Switch	
S2022	N5090028	Tact Switch	
S2023	N5090028	Tact Switch	
S2024	N5090028	Tact Switch	
S2025	N5090028	Tact Switch	
S2026	N5090028	Tact Switch	
S2027	N5090028	Tact Switch	
S2028	N5090028	Tact Switch	
S2029	N5090028	Tact Switch	
S2030	N4090082	Push Switch	
S2031	N4090082	Push Switch	
S2032	N4090082	Push Switch	
J2001	P0090535	Connector	
J2002	P0090527	Connector	
J2003	P0090528	Connector	
J2004	P0090526	Connector	
J2005	P0090528	Connector	
J2007	P0090524	Connector	
J2008	P0090528	Connector	
J2009	P0090525	Connector	
J2010	P0090531	Connector	
J2011	P0090525	Connector	
P2001	T9204841	CW-ASSY	
	R7057851	Cushion	

REG UNIT

Symbol No.	Part No.	Description	Device
	F2890108	Printed Circuit Board	
	C028908AA	PCB with Components	
C801	K40129011	AL. Electro. CAP.	16WV 1000uF
C802	K40129004	AL. Electro. CAP.	16WV 10uF
C803	K12171102	Ceramic CAP.	50WV 0.001uF
C804	K12171102	Ceramic CAP.	50WV 0.001uF
C805	K40179016	AL. Electro. CAP.	50WV 0.1uF
L801	L2190002	AFC	100uH
TP801	Q5000037	TP-H	MK-10160
TP802	Q5000037	TP-H	MK-10160
TP803	Q5000037	TP-H	MK-10160
TP804	Q5000037	TP-H	MK-10160
TP805	Q5000037	TP-H	MK-10160

PROTECTOR UNIT

Symbol No.	Part No.	Description	Device
	F2889102	Printed Circuit Board	
	C028892AA	PCB with Components	

PARTS LIST

D701	G2090232	Diode	S11B
ZNR701	Q9000381	Surge Absorber	ERZ-C10DK471
ZNR702	Q9000382	Surge Absorber	ERZ-C10DK681
ZNR703	Q9000382	Surge Absorber	ERZ-C10DK681
F701	Q0000027	Miniature Fuse	MF51 5A
F702	Q0000027	Miniature Fuse	MF51 5A
	P2000024	Fuse Holder	

VR-A UNIT

Symbol No.	Part No.	Description	Device
	F2890104A	Printed Circuit Board	
	C028904AA	PCB with Components	
R402	J01225103	Carbon Film RES.	1/6W 10K ohm PJ
R403	J02245103	Carbon Film RES.	1/4W 10K ohm SJ
R404	J02245101	Carbon Film RES.	1/4W 100 ohm SJ
R405	J02245101	Carbon Film RES.	1/4W 100 ohm SJ
VR401	J62800100	Potentiometer (AF/RF)	10KA/10KC
VR402	J63800008	Potentiometer (SQL/TONE)	50KB,10KB/10KB
VR403	J63800007	Potentiometer (MIC/DRIVE)	10KA/50KB,10KB
J401	P0090524	Connector	
J402	P0090525	Connector	
J403	P0090525	Connector	
J404	P0090526	Connector	
J405	P0090529	Connector	
J406	P0090524	Connector	
J407	P0090524	Connector	
J408	P0090524	Connector	
J409	P1090522	Connector	
J410	P0090524	Connector	

VR-B UNIT

Symbol No.	Part No.	Description	Device
	F2890105A	Printed Circuit Board	
	C028905AA	PCB with Components	
R501	J02225472	Carbon Film RES.	1/6W 4.7k ohm UJ
VR501	J60800133	Potentiometer (MONITOR)	50KB
C501	K70167334	Tantalum CAP.	35WV 0.33uF
C502	K19149021	Ceramic CAP.	25WV 0.047uF
C503	K19149025	Ceramic CAP.	25WV 0.1uF
L501	L1190115	Coil	150mH

VR-C UNIT

Symbol No.	Part No.	Description	Device
	F2890106A	Printed Circuit Board	
	C028906AA	PCB with Components	
D201	G2090379	Diode	1SS119
R201	J02225472	Carbon Film RES.	1/6W 4.7k ohm UJ
VR201	J60800134	Potentiometer (VOX GAIN)	10KA
VR202	J60800136	Potentiometer (VOX DELAY)	500KA
VR203	J60800135	Potentiometer (VOX ANTI-TRIP)	10KB
VR204	J60800137	Potentiometer (KEYER SPEED)	500KC
S201	N0190144	Rotary Switch (AGC)	
S202	N0190142	Rotary Switch (SAT)	

J201	P0090528	Connector	
J202	P0090524	Connector	
J203	P0090526	Connector	
J204	P0090525	Connector	
J205	P0090528	Connector	

VR-D UNIT

Symbol No.	Part No.	Description	Device
	F2890109	Printed Circuit Board	
	C028909AA	PCB with Components	
R901	J07225222	Carbon Film RES.	1/6W 2.2k ohm P
VR901	J62800101	Potentiometer (SHIFT/NOTCH)	10KB/10KB
J901	P0090524	Connector	
J902	P0090525	Connector	

SW-A UNIT

Symbol No.	Part No.	Description	Device
	F2890101	Printed Circuit Board	
	C028901AA	PCB with Components	
D301	G2090408	Diode	1SS270
R301	J02245330	Carbon Film RES.	1/4W 33 ohm S
S301	N4090109	Push Switch	
J301	P0090525	Connector	
J302	P0090528	Connector	
J303	P0090529	Connector	
TP301	Q5000036	TP-G	MK-1095
TP302	Q5000036	TP-G	MK-1095

SW-B UNIT

Symbol No.	Part No.	Description	Device
	F2890102	Printed Circuit Board	
	C028902AA	PCB with Components	
D601	G2090269	LED	SR-538D
D602	G2090268	LED	SY-438D
D603	G2090268	LED	SY-438D
D604	G2090267	LED	SG-238D
D605	G2090267	LED	SG-238D
R601	J02225122	Carbon Film RES.	1/6W 1.2k ohm U
R602	J02225122	Carbon Film RES.	1/6W 1.2k ohm U
R603	J02225122	Carbon Film RES.	1/6W 1.2k ohm U
R604	J02225122	Carbon Film RES.	1/6W 1.2k ohm U
R605	J02225122	Carbon Film RES.	1/6W 1.2k ohm U
R606	J02225222	Carbon Film RES.	1/6W 2.2k ohm U
S601	N4090103	Push Switch	

SW-C UNIT

Symbol No.	Part No.	Description	Device
	F2890103	Printed Circuit Board	
	C028903AA	PCB with Components	
Q101	G3107331Q	Transistor	2SA733AQ
R101	J02225474	Carbon Film RES.	1/6W 470k ohm UJ
S101	N4090104	Push Switch	
S102	N0190137	Rotary Switch	
J101	P0090525	Connector	
J102	P0090527	Connector	

PARTS LIST

ENCODER UNIT			
ymbol No.	Part No.	Description	Device
	F2890107	Printed Circuit Board	
	C028907AA	PCB with Components	
551	Q9000388	Rotary Code Switch	
551	P0090525	Connector	

MODEL CHART

Symbol No.		Part No.	Description	Device	MODEL											
					A1	A2	B1	B2	B3	C1	C2	C3	H1	H2	H3	F
144MHz MAIN UNIT	D6025	G2090408	Diode	1SS270	o	o		o	o		o	o		o	o	o
	D6026	G2090408	Diode	1SS270	o	o	o	o	o	o	o	o	o	o	o	
	D6027	G2090408	Diode	1SS270		o	o		o	o		o	o		o	o
	D6030	G2090408	Diode	1SS270			o	o	o	o	o	o				
	D6031	G2090408	Diode	1SS270												o
430MHz PLL UNIT	D8004	G2090408	Diode	1SS270						o	o	o				o
	D8005	G2090408	Diode	1SS270	o	o				o	o	o	o	o	o	
	D8006	G2090408	Diode	1SS270			o	o	o	o	o	o				
	D8007	G2090408	Diode	1SS270	o	o	o	o	o				o	o	o	o
	D8008	G2090408	Diode	1SS270	o	o	o	o	o	o	o	o	o	o	o	o
	D8010	G2090408	Diode	1SS270	o	o	o	o	o	o	o	o	o	o	o	
	D8011	G2090408	Diode	1SS270	o	o										o

MODEL	FREQUENCY RANGE		PRESET FREQUENCY		PRESET REPEATER SHIFT		TONE BURST
	2m BAND	70cm BAND	2m BAND	70cm BAND	2m BAND	70cm BAND	
A1	144 - 148 MHz	430 - 450 MHz	144.00 MHz	430.00 MHz	600 kHz	5 MHz	1800 Hz
A2	141 - 154 MHz	430 - 450 MHz	144.00 MHz	430.00 MHz	600 kHz	5 MHz	1800 Hz
B1	144 - 146 MHz	430 - 440 MHz	144.00 MHz	430.00 MHz	600 kHz	7.6 MHz	1750 Hz
B2	144 - 148 MHz	430 - 440 MHz	144.00 MHz	430.00 MHz	600 kHz	7.6 MHz	1750 Hz
B3	141 - 154 MHz	430 - 440 MHz	141.00 MHz	430.00 MHz	600 kHz	7.6 MHz	1750 Hz
C1	144 - 146 MHz	430 - 440 MHz	144.00 MHz	430.00 MHz	600 kHz	1.6 MHz	1750 Hz
C2	144 - 148 MHz	430 - 440 MHz	144.00 MHz	430.00 MHz	600 kHz	1.6 MHz	1750 Hz
C3	141 - 154 MHz	430 - 440 MHz	144.00 MHz	430.00 MHz	600 kHz	1.6 MHz	1750 Hz
H1	144 - 146 MHz	430 - 440 MHz	144.00 MHz	430.00 MHz	600 kHz	5 MHz	1750 Hz
H2	144 - 148 MHz	430 - 440 MHz	144.00 MHz	430.00 MHz	600 kHz	5 MHz	1750 Hz
H3	141 - 154 MHz	430 - 440 MHz	144.00 MHz	430.00 MHz	600 kHz	5 MHz	1750 Hz
F	144 - 146 MHz	430 - 440 MHz	144.00 MHz	430.00 MHz	600 kHz	5 MHz	-

PARTS LIST (FEX-736-50)

MAIN CHASSIS			
Symbol No.	Part No.	Description	Device
Q1	G1090778	IC	L7809
	T9205536A	Wire ASSY	
	T9205591	Wire ASSY	
	T9205590	Wire ASSY	
	T9205546	Wire ASSY	
	T9317800A	Wire ASSY	
	R0083771	UNIT CHASSIS	
	R0083790B	UNIT Bottom Cover	
	R0509970B	Shield Cover	
	R8050252	UNIT Seal A	

50MHz PLL UNIT			
Symbol No.	Part No.	Description	Device
	F2897102	Printed Circuit Board	
	C028972AA	PCB with Components: Vers. F w/o 50MHz SUB VCO UNIT	
	C028972AB	PCB with Components: Vers. A w/o 50MHz SUB VCO UNIT	
	C028972AC	PCB with Components: Vers. F w/50MHz SUB VCO UNIT	
	C028972AD	PCB with Components: Vers. A w/50MHz SUB VCO UNIT	
Q1006	G3304600B	Transistor	2SC460B
Q1007	G3304600B	Transistor	2SC460B
Q1008	G1090798	IC	MC145155P
Q1009	G3802410G	FET	2SK241GR
Q1010	G3304600B	Transistor	2SC460B
Q1011	G3304600B	Transistor	2SC460B
Q1012	G3304600B	Transistor	2SC460B
Q1013	G3802410G	FET	2SK241GR
Q1014	G3305350B	Transistor	2SC535B
Q1015	G1090473	IC	TC5081AP
Q1019	G1090795	IC	MB504
Q1020	G1090707	IC	MC145156P
Q1022	G1090796	IC	MB505-16
Q1023	G1090247	IC	TC9122P
Q1024	G3304600B	Transistor	2SC460B
Q1025	G3304600B	Transistor	2SC460B
Q1026	G3304580C	Transistor	2SC458C
Q1027	G3304580C	Transistor	2SC458C
Q1028	G3304580C	Transistor	2SC458C
Q1029	G3304580C	Transistor	2SC458C
Q1030	G3304580C	Transistor	2SC458C
Q1031	G3304580C	Transistor	2SC458C
Q1032	G3090079	Transistor	BA1A4P
Q1033	G3090079	Transistor	BA1A4P
Q1034	G1090084	IC	uPC78L05
D1001	G2090023	Diode	1SV50
D1002	G2090023	Diode	1SV50
D1003	G2022090	Diode	1S2209
D1004	G2090408	Diode	1SS270
D1005	G2022090	Diode	1S2209
D1006	G2090384	Diode	HZ7C2
D1011(A)	G2090408	Diode	1SS270
D1012(F)	G2090408	Diode	1SS270
D1014	G2090408	Diode	1SS270
D1016(F)	G2090408	Diode	1SS270
X1001	H0102817	XTAL	HC-49/T 20.537 MHz
R1001	J01225474	Carbon Film RES.	1/6W 470k ohm PJ
R1002	J01225151	Carbon Film RES.	1/6W 150 ohm PJ
R1003	J01225101	Carbon Film RES.	1/6W 100 ohm PJ
R1004	J01225473	Carbon Film RES.	1/6W 47k ohm PJ
R1005	J01225470	Carbon Film RES.	1/6W 47 ohm PJ
R1006	J02225103	Carbon Film RES.	1/6W 10k ohm UJ
R1007	J02225223	Carbon Film RES.	1/6W 22k ohm
R1008	J02225221	Carbon Film RES.	1/6W 220 ohm
R1009	J02225104	Carbon Film RES.	1/6W 100k ohm
R1010	J02225470	Carbon Film RES.	1/6W 47 ohm
R1011	J02225103	Carbon Film RES.	1/6W 10k ohm
R1012	J02225562	Carbon Film RES.	1/6W 5.6k ohm
R1013	J01225473	Carbon Film RES.	1/6W 47k ohm
R1014	J02225471	Carbon Film RES.	1/6W 470 ohm
R1015	J02225562	Carbon Film RES.	1/6W 5.6k ohm
R1016	J02225223	Carbon Film RES.	1/6W 22k ohm
R1017	J02225102	Carbon Film RES.	1/6W 1k ohm
R1018	J02225473	Carbon Film RES.	1/6W 47k ohm
R1019	J02225101	Carbon Film RES.	1/6W 100 ohm
R1020	J02225471	Carbon Film RES.	1/6W 470 ohm
R1021	J02225103	Carbon Film RES.	1/6W 10k ohm
R1022	J02225222	Carbon Film RES.	1/6W 2.2k ohm
R1023	J02225222	Carbon Film RES.	1/6W 2.2k ohm
R1025	J02225102	Carbon Film RES.	1/6W 1k ohm
R1026	J02225222	Carbon Film RES.	1/6W 2.2k ohm
R1027	J02225104	Carbon Film RES.	1/6W 100k ohm
R1028	J01225472	Carbon Film RES.	1/6W 4.7k ohm
R1029	J01225333	Carbon Film RES.	1/6W 33k ohm
R1030	J01225473	Carbon Film RES.	1/6W 47k ohm
R1031	J02225102	Carbon Film RES.	1/6W 1k ohm
R1032	J02225101	Carbon Film RES.	1/6W 100 ohm
R1033	J01225560	Carbon Film RES.	1/6W 56 ohm
R1034	J01225223	Carbon Film RES.	1/6W 22k ohm
R1035	J02225562	Carbon Film RES.	1/6W 5.6k ohm
R1036	J01225681	Carbon Film RES.	1/6W 680 ohm
R1037	J01225101	Carbon Film RES.	1/6W 100 ohm
R1038	J02225223	Carbon Film RES.	1/6W 22k ohm
R1039	J01225562	Carbon Film RES.	1/6W 5.6k ohm
R1040	J02225331	Carbon Film RES.	1/6W 330 ohm
R1041	J01225560	Carbon Film RES.	1/6W 56 ohm
R1042	J01225331	Carbon Film RES.	1/6W 330 ohm
R1043	J02225473	Carbon Film RES.	1/6W 47k ohm
R1044	J02225471	Carbon Film RES.	1/6W 470 ohm
R1046	J02225562	Carbon Film RES.	1/6W 5.6k ohm
R1047	J02225223	Carbon Film RES.	1/6W 22k ohm
R1048	J02225331	Carbon Film RES.	1/6W 330k ohm
R1049	J02225102	Carbon Film RES.	1/6W 1k ohm
R1050	J02225105	Carbon Film RES.	1/6W 1 Mohm
R1051	J02225560	Carbon Film RES.	1/6W 56 ohm
R1052	J01225152	Carbon Film RES.	1/6W 1.5k ohm
R1053	J02225332	Carbon Film RES.	1/6W 3.3k ohm
R1054	J02225222	Carbon Film RES.	1/6W 2.2k ohm
R1055	J01225104	Carbon Film RES.	1/6W 100k ohm
R1063	J01225560	Carbon Film RES.	1/6W 56 ohm
R1064	J01225222	Carbon Film RES.	1/6W 2.2k ohm
R1065	J01225561	Carbon Film RES.	1/6W 560 ohm
R1066	J01225222	Carbon Film RES.	1/6W 2.2k ohm
R1067	J01225471	Carbon Film RES.	1/6W 470 ohm
R1069	J01225560	Carbon Film RES.	1/6W 56 ohm
R1070	J01225102	Carbon Film RES.	1/6W 1k ohm
R1071	J01225560	Carbon Film RES.	1/6W 56 ohm
R1072	J01225102	Carbon Film RES.	1/6W 1k ohm
R1073	J01225560	Carbon Film RES.	1/6W 56 ohm
R1075	J01225102	Carbon Film RES.	1/6W 1k ohm
R1076	J01225562	Carbon Film RES.	1/6W 5.6k ohm
R1078	J02225101	Carbon Film RES.	1/6W 100 ohm
R1079	J01225473	Carbon Film RES.	1/6W 47k ohm
R1080	J01225222	Carbon Film RES.	1/6W 2.2k ohm
R1081	J01225473	Carbon Film RES.	1/6W 47k ohm
R1082	J02225222	Carbon Film RES.	1/6W 2.2k ohm
R1083	J01225473	Carbon Film RES.	1/6W 47k ohm
R1084	J01225222	Carbon Film RES.	1/6W 2.2k ohm
R1085	J02225473	Carbon Film RES.	1/6W 47k ohm
R1086	J01225222	Carbon Film RES.	1/6W 2.2k ohm
R1087	J01225473	Carbon Film RES.	1/6W 47k ohm
R1088	J01225222	Carbon Film RES.	1/6W 2.2k ohm
R1089	J01225473	Carbon Film RES.	1/6W 47k ohm
R1090	J01225222	Carbon Film RES.	1/6W 2.2k ohm
R1091	J01225102	Carbon Film RES.	1/6W 1k ohm
R1092	J02225471	Carbon Film RES.	1/6W 470 ohm
C1001	K05175180	Ceramic CAP.	RH 50WV 18p
C1002	K05172050	Ceramic CAP.	RH 50WV 5p
C1003	K05175150	Ceramic CAP.	RH 50WV 15p
C1004	K05173080	Ceramic CAP.	RH 50WV 8p
C1005	K05175270	Ceramic CAP.	RH 50WV 27p
C1006	K13179014	Ceramic CAP.	F 50WV 0.0047u
C1007	K40109001	AL. Electro. CAP.	10WV 100u
C1008	K02179001	Ceramic CAP.	CK 50WV 1p
C1009	K13179008	Ceramic CAP.	F 50WV 0.01u
C1010	K12171102	Ceramic CAP.	E 50WV 0.001u

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1011	K13179008	Ceramic CAP.	F	50WV	0.01uF
1012	K05175220	Ceramic CAP.	RH	50WV	22pF
1013	K05173060	Ceramic CAP.	RH	50WV	6pF
1014	K13179008	Ceramic CAP.	F	50WV	0.01uF
1015	K12171102	Ceramic CAP.	E	50WV	0.001uF
1017	K02172059	Ceramic CAP.	CK	50WV	0.5pF
1018	K05173100	Ceramic CAP.	RH	50WV	10pF
1019	K12171102	Ceramic CAP.	E	50WV	0.001uF
1020	K05175220	Ceramic CAP.	RH	50WV	22pF
1021	K05175220	Ceramic CAP.	RH	50WV	22pF
1022	K19149021	Ceramic CAP.		25WV	0.047uF
1023	K19149021	Ceramic CAP.		25WV	0.047uF
1024	K13179008	Ceramic CAP.	F	50WV	0.01uF
1025	K70147105	Tantalum CAP.		25WV	1uF
1026	K13179008	Ceramic CAP.	F	50WV	0.01uF
1027	K19149025	Ceramic CAP.		25WV	0.1uF
1028	K40109001	AL. Electro. CAP.		10WV	100uF
1029	K19149021	Ceramic CAP.		25WV	0.047uF
1030	K70147105	Tantalum CAP.		25WV	1uF
1032	K19149021	Ceramic CAP.		25WV	0.047uF
1033	K12171102	Ceramic CAP.	E	50WV	0.001uF
1034	K13179008	Ceramic CAP.	F	50WV	0.01uF
1035	K19149025	Ceramic CAP.		25WV	0.1uF
1037	K12171102	Ceramic CAP.	E	50WV	0.001uF
1038	K05172040	Ceramic CAP.	RJ	50WV	4pF
1039	K06175101	Ceramic CAP.	UJ	50WV	100pF
1040	K06175101	Ceramic CAP.	UJ	50WV	100pF
1041	K13179008	Ceramic CAP.	F	50WV	0.01uF
1042	K40129004	AL. Electro. CAP.		16WV	10uF
1043	K12171102	Ceramic CAP.	E	50WV	0.001uF
1044	K02175101	Ceramic CAP.	CH	50WV	100pF
1045	K13179008	Ceramic CAP.	F	50WV	0.01uF
1046	K05175150	Ceramic CAP.	RH	50WV	15pF
1047	K13179008	Ceramic CAP.	F	50WV	0.01uF
1048	K13179008	Ceramic CAP.	F	50WV	0.01uF
1049	K02179001	Ceramic CAP.	CK	50WV	1pF
1050	K05175150	Ceramic CAP.	RH	50WV	15pF
1051	K13179008	Ceramic CAP.	F	50WV	0.01uF
1052	K13179008	Ceramic CAP.	F	50WV	0.01uF
1053	K13179008	Ceramic CAP.	F	50WV	0.01uF
1054	K05175150	Ceramic CAP.	RH	50WV	15pF
1055	K13179008	Ceramic CAP.	F	50WV	0.01uF
1056	K02172059	Ceramic CAP.	CK	50WV	0.5pF
1057	K05175150	Ceramic CAP.	RH	50WV	15pF
1058	K13179008	Ceramic CAP.	F	50WV	0.01uF
1059	K02179001	Ceramic CAP.	CK	50WV	1pF
1060	K13179008	Ceramic CAP.	F	50WV	0.01uF
1061	K05172050	Ceramic CAP.	RH	50WV	5pF
1062	K13179008	Ceramic CAP.	F	50WV	0.01uF
1063	K40179011	AL. Electro. CAP.		50WV	3.3uF
1065	K13179014	Ceramic CAP.	F	50WV	0.0047uF
1066	K13179014	Ceramic CAP.	F	50WV	0.0047uF
1067	K19149013	Ceramic CAP.		25WV	0.01uF
1068	K40109001	AL. Electro. CAP.		10WV	100uF
1069	K19149021	Ceramic CAP.		25WV	0.047uF
1070	K70167474	Tantalum CAP.		35WV	0.47uF
1071	K19149013	Ceramic CAP.		25WV	0.01uF
1072	K12171102	Ceramic CAP.	E	50WV	0.001uF
1076	K13179014	Ceramic CAP.	F	50WV	0.0047uF
1081	K05172020	Ceramic CAP.	RK	50WV	2pF
1082	K05172020	Ceramic CAP.	RK	50WV	2pF
1084	K12171102	Ceramic CAP.	E	50WV	0.001uF
1085	K19149025	Ceramic CAP.		25WV	0.1uF
1086	K13179014	Ceramic CAP.	F	50WV	0.0047uF
1087	K12171102	Ceramic CAP.	E	50WV	0.001uF
1088	K12171102	Ceramic CAP.	E	50WV	0.001uF
1089	K40109001	AL. Electro. CAP.		10WV	100uF
1090	K19149025	Ceramic CAP.		25WV	0.1uF
1091	K13179008	Ceramic CAP.	F	50WV	0.01uF
1092	K05172020	Ceramic CAP.	RK	50WV	2pF
1093	K70167474	Tantalum CAP.		35WV	0.47uF
1094	K19149021	Ceramic CAP.		25WV	0.047uF
1097	K05173070	Ceramic CAP.	RH	50WV	7pF
1098	K12171102	Ceramic CAP.	E	50WV	0.001uF
1099	K13179014	Ceramic CAP.		50WV	0.0047uF
1100	K13179008	Ceramic CAP.	F	50WV	0.01uF
1101	K19149025	Ceramic CAP.		25WV	0.1uF
1102	K12171102	Ceramic CAP.	E	50WV	0.001uF
1103	K05173100	Ceramic CAP.	RH	50WV	10pF
1104	K12171102	Ceramic CAP.	E	50WV	0.001uF
1105	K05173100	Ceramic CAP.	RH	50WV	10pF
C1106	K12171102	Ceramic CAP.	E	50WV	0.001uF
C1107	K13179008	Ceramic CAP.	F	50WV	0.01uF
C1108	K00175101	Ceramic CAP.	SL	50WV	100pF
C1109	K00175101	Ceramic CAP.	SL	50WV	100pF
C1110	K00175101	Ceramic CAP.	SL	50WV	100pF
C1111	K00175101	Ceramic CAP.	SL	50WV	100pF
C1112	K00175101	Ceramic CAP.	SL	50WV	100pF
C1113	K00175101	Ceramic CAP.	SL	50WV	100pF
C1114	K70167104	Tantalum CAP.		35WV	0.1uF
C1115	K12171102	Ceramic CAP.	E	50WV	0.001uF
C1116	K12171102	Ceramic CAP.	E	50WV	0.001uF
C1117	K40109002	AL. Electro. CAP.		10WV	47uF
C1118	K05173070	Ceramic CAP.	RH	50WV	7pF
C1119	K05173100	Ceramic CAP.	RH	50WV	10pF
C1120	K70147105	Tantalum CAP.		25WV	1uF
C1121	K22141005	CAP. Chip	F	25WV	0.1uF
C1122	K22170229	CAP. Chip	CH	50WV	56pF
C1123	K22170229	CAP. Chip	CH	50WV	56pF
C1124	K22170229	CAP. Chip	CH	50WV	56pF
C1125	K22170229	CAP. Chip	CH	50WV	56pF
C1126	K22170229	CAP. Chip	CH	50WV	56pF
C1127	K22170229	CAP. Chip	CH	50WV	56pF
C1128	K13179008	Ceramic CAP.	F	50WV	0.01uF
C1129	K13179008	Ceramic CAP.	F	50WV	0.01uF
C1130	K22170817	CAP. Chip	B	50WV	0.01uF
C1131	K22170235	CAP. Chip	CH	50WV	100pF
T1001	L0021358	Coil			
T1002	L0021358	Coil			
T1003	L0021358	Coil			
T1004	L0021358	Coil			
T1005	L0021358	Coil			
L1001	L1190250	M.RFC	2.2uH		
L1002	L1190250	M.RFC	2.2uH		
L1003	L0190025	Coil			
L1004	L1190246	M.RFC	1uH		
L1006	L1190270	M.RFC	100uH		
L1007	L1190262	M.RFC	22uH		
L1008	L1190189	M.RFC	1mH		
L1009	L0020652	Coil			
L1010	L1190270	M.RFC	100uH		
L1011	L1190270	M.RFC	100uH		
L1012	L1190270	M.RFC	100uH		
L1013	L1190228	M.RFC	680uH		
L1019	L1190246	M.RFC	1uH		
L1020	L1190270	M.RFC	100uH		
L1021	L1190270	M.RFC	100uH		
L1022	L1190270	M.RFC	100uH		
L1023	L1190257	M.RFC	8.2uH		
L1024	L1190257	M.RFC	8.2uH		
L1026	L0021359	Coil			
L1027	L0021359	Coil			
J1001	P0090525	Connector			
J1002	P0090527	Connector			
P1001	T9205550	Wire ASSY			
	R0110610	Spring Board			
	R0083860D	Shield Case			
	R0510040	Shield Cover			
	R0083880	Shield Bottom Cover			
	R0062770B	VCO Case A			
	R0062780A	VCO Case Lid			

SUB VCO UNIT

Symbol No.	Part No.	Description	Device		
	F2928000	Printed Circuit Board			
	C029280AA	PCB with Components.			
Q1016	G3805070F	FET	2SK507F		
Q1017	G3333550	Transistor	2SC3355		
D1007	G2090180	Diode	FC53M-5		
D1008	G2090180	Diode	FC53M-5		
R1056	J02225330	Carbon Film RES.	1/6W	33 ohm	UJ
R1057	J01225221	Carbon Film RES.	1/6W	220 ohm	PJ
R1058	J02225332	Carbon Film RES.	1/6W	3.3k ohm	UJ
R1059	J02225103	Carbon Film RES.	1/6W	10k ohm	UJ

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R1060	J02225101	Carbon Film RES.	1/6W	100 ohm	UJ
R1061	J01225101	Carbon Film RES.	1/6W	100 ohm	PJ
R1068	J01225102	Carbon Film RES.	1/6W	1k ohm	PJ
C1073	K05175180	Ceramic CAP.	RH	50WV	18pF
C1074	K12171102	Ceramic CAP.	E	50WV	0.001uF
C1075	K40109001	AL. Electro. CAP.		10WV	100uF
C1077	K05173100	Ceramic CAP.	UJ	50WV	10pF
C1078	K05173080	Ceramic CAP.	RH	50WV	8pF
C1079	K02172059	Ceramic CAP.	CK	50WV	0.5pF
C1080	K13179014	Ceramic CAP.	F	50WV	0.0047uF
C1083	K22171002	CAP. Chip	F	50WV	0.0047uF
C1095	K19149021	Ceramic CAP.		25WV	0.047uF
C1096	K12171102	Ceramic CAP.	E	50WV	0.001uF
L1014	L1190242	M.RFC	0.47uH		
L1015	L1190242	M.RFC	0.47uH		
L1016	L0190138	Coil			
L1017	L0021520	Coil			
L1018	L1190242	M.RFC	0.47uH		
L1025	L0020852	Coil			
	L9190001	Ferrite Beads			
50MHz RF UNIT					
	F2897101	Printed Circuit Board			
	C028971AA	PCB with Components			
Q2001	G4801220L	FET	3SK122L		
Q2002	G2090247	Diode	ND487C1-3R		
Q2003	G4801220L	FET	3SK122L		
Q2004	G3115280	Transistor	2SA1528		
Q2005	G3802410G	FET	2SK241GR		
Q2006	G3802410G	FET	2SK241GR		
Q2007	G3320260	Transistor	2SC2026		
Q2008	G3325380	Transistor	2SC2538		
Q2009	G3207720Q	Transistor	2SB772Q		
Q2010	G3207720Q	Transistor	2SB772Q		
Q2011	G1090606	IC	LA6358		
Q2012	G3115280	Transistor	2SA1528		
Q2013	G3090079	Transistor	BA1A4P		
D2001	G2022090	Diode	1S2209		
D2002	G2090027	Diode	1SS53		
D2003	G2022090	Diode	1S2209		
D2004	G2022090	Diode	1S2209		
D2005	G2022090	Diode	1S2209		
D2006	G2090027	Diode	1SS53		
D2007	G2060004	Diode	1SS270TJ		
D2008	G2090027	Diode	1SS53		
D2009	G2090027	Diode	1SS53		
D2010	G2090027	Diode	1SS53		
D2011	G2022090	Diode	1S2209		
D2012	G2022090	Diode	1S2209		
D2013	G2022090	Diode	1S2209		
D2015	G2015550	Diode	1S1555		
D2016	G2090408	Diode	1SS270		
D2017	G2090383	Diode	MC911		
D2018	G2090383	Diode	MC911		
D2019	G2060004	Diode	1SS270TJ		
D2020	G2090408	Diode	1SS270		
D2021	G2060004	Diode	1SS270TJ		
TH2001	G9090026	Thermistor			
TH2002	G9090020	Thermistor			
R2002	J01225104	Carbon Film RES.	1/6W	100k ohm	PJ
R2003	J01225473	Carbon Film RES.	1/6W	47k ohm	PJ
R2004	J01225225	Carbon Film RES.	1/6W	2.2 Mohm	PJ
R2005	J01225470	Carbon Film RES.	1/6W	47 ohm	PJ
R2006	J01225102	Carbon Film RES.	1/6W	1k ohm	PJ
R2007	J01225470	Carbon Film RES.	1/6W	47 ohm	PJ
R2008	J01225104	Carbon Film RES.	1/6W	100k ohm	PJ
R2009	J01225104	Carbon Film RES.	1/6W	100k ohm	PJ
R2010	J01225104	Carbon Film RES.	1/6W	100k ohm	PJ
R2011	J01225331	Carbon Film RES.	1/6W	330 ohm	PJ
R2012	J01225180	Carbon Film RES.	1/6W	18 ohm	PJ
R2013	J01225331	Carbon Film RES.	1/6W	330 ohm	PJ
R2014	J01225473	Carbon Film RES.	1/6W	47k ohm	PJ
R2015	J01225473	Carbon Film RES.	1/6W	47k ohm	PJ
R2016	J01225473	Carbon Film RES.	1/6W	47k ohm	PJ
R2017	J01225470	Carbon Film RES.	1/6W	47 ohm	PJ
R2018	J01225470	Carbon Film RES.	1/6W	47 ohm	
R2019	J01225221	Carbon Film RES.	1/6W	220 ohm	
R2020	J01225820	Carbon Film RES.	1/6W	82 ohm	
R2021	J01225221	Carbon Film RES.	1/6W	220 ohm	
R2022	J01225101	Carbon Film RES.	1/6W	100 ohm	
R2023	J01225470	Carbon Film RES.	1/6W	47 ohm	
R2024	J01225560	Carbon Film RES.	1/6W	56 ohm	
R2025	J01225473	Carbon Film RES.	1/6W	47k ohm	
R2026	J01225473	Carbon Film RES.	1/6W	47k ohm	
R2027	J01225222	Carbon Film RES.	1/6W	2.2k ohm	
R2028	J01225104	Carbon Film RES.	1/6W	100k ohm	
R2029	J01225104	Carbon Film RES.	1/6W	100k ohm	
R2030	J01225104	Carbon Film RES.	1/6W	100k ohm	
R2031	J01225104	Carbon Film RES.	1/6W	100k ohm	
R2033	J01225561	Carbon Film RES.	1/6W	560 ohm	
R2034	J01225221	Carbon Film RES.	1/6W	220 ohm	
R2035	J01225220	Carbon Film RES.	1/6W	22 ohm	
R2036	J01225479	Carbon Film RES.	1/6W	4.7 ohm	
R2037	J01225221	Carbon Film RES.	1/6W	220 ohm	
R2038	J01225821	Carbon Film RES.	1/6W	820 ohm	
R2039	J01225103	Carbon Film RES.	1/6W	10k ohm	
R2040	J01225471	Carbon Film RES.	1/6W	470 ohm	
R2041	J01225103	Carbon Film RES.	1/6W	10k ohm	
R2042	J01275471	Carbon Film RES.	1/2W	470 ohm	
R2043	J01225473	Carbon Film RES.	1/6W	47k ohm	
R2044	J01225223	Carbon Film RES.	1/6W	22k ohm	
R2045	J01225223	Carbon Film RES.	1/6W	22k ohm	
R2046	J01225104	Carbon Film RES.	1/6W	100k ohm	
R2047	J01225473	Carbon Film RES.	1/6W	47k ohm	
R2048	J01225223	Carbon Film RES.	1/6W	22k ohm	
R2049	J01225103	Carbon Film RES.	1/6W	10k ohm	
R2050	J01225103	Carbon Film RES.	1/6W	10k ohm	
R2051	J01225104	Carbon Film RES.	1/6W	100k ohm	
R2052	J24205560	RES. Chip	1/10W	56 ohm	
VR2001	J51745101	POT.	B	100 ohm	
VR2002	J51745101	POT.	B	100 ohm	
VR2003	J51745102	POT.	B	1k ohm	
VR2004	J51745473	POT.	B	47k ohm	
VR2005	J51745473	POT.	B	47k ohm	
VR2006	J51745104	POT.	B	100k ohm	
C2001	K05172050	Ceramic CAP.	RH	50WV	5
C2002	K05175330	Ceramic CAP.	RH	50WV	33
C2003	K13179014	Ceramic CAP.	F	50WV	0.0047
C2004	K00175470	Ceramic CAP.	SL	50WV	47
C2005	K13179008	Ceramic CAP.	F	50WV	0.01
C2006	K12171102	Ceramic CAP.	E	50WV	0.001
C2007	K13179008	Ceramic CAP.	F	50WV	0.01
C2008	K13179008	Ceramic CAP.	F	50WV	0.01
C2009	K13179008	Ceramic CAP.	F	50WV	0.01
C2010	K13179008	Ceramic CAP.	F	50WV	0.01
C2011	K02172020	Ceramic CAP.	CK	50WV	2
C2012	K05175330	Ceramic CAP.	RH	50WV	33
C2013	K05172050	Ceramic CAP.	RH	50WV	5
C2014	K05175220	Ceramic CAP.	RH	50WV	22
C2015	K05173060	Ceramic CAP.	RH	50WV	6
C2016	K05175270	Ceramic CAP.	RH	50WV	27
C2017	K13179008	Ceramic CAP.	F	50WV	0.01
C2018	K02172050	Ceramic CAP.	CK	50WV	2
C2019	K05175270	Ceramic CAP.	RH	50WV	27
C2020	K05173060	Ceramic CAP.	RH	50WV	6
C2022	K13179014	Ceramic CAP.	F	50WV	0.0047
C2023	K13179014	Ceramic CAP.	F	50WV	0.0047
C2025	K05175330	Ceramic CAP.	RH	50WV	33
C2026	K13179008	Ceramic CAP.	F	50WV	0.01
C2027	K13179008	Ceramic CAP.	F	50WV	0.01
C2028	K13179008	Ceramic CAP.	F	50WV	0.01
C2029	K13179014	Ceramic CAP.	F	50WV	0.0047
C2030	K13179008	Ceramic CAP.	F	50WV	0.01
C2031	K13179014	Ceramic CAP.	F	50WV	0.0047
C2032	K13179008	Ceramic CAP.	F	50WV	0.01
C2033	K05173100	Ceramic CAP.	RH	50WV	10
C2034	K05173100	Ceramic CAP.	RH	50WV	10
C2035	K12171102	Ceramic CAP.	E	50WV	0.001
C2036	K13179008	Ceramic CAP.	F	50WV	0.01
C2037	K13179008	Ceramic CAP.	F	50WV	0.01
C2038	K10179042	Ceramic CAP.	B	50WV	0.001
C2039	K05175330	Ceramic CAP.	RH	50WV	33
C2040	K12171102	Ceramic CAP.	E	50WV	0.001
C2041	K05172050	Ceramic CAP.	RH	50WV	5
C2042	K13179008	Ceramic CAP.	F	50WV	0.01
C2043	K05175220	Ceramic CAP.	RH	50WV	22
C2044	K05172050	Ceramic CAP.	RH	50WV	5
C2045	K05175330	Ceramic CAP.	RH	50WV	33
C2046	K02172059	Ceramic CAP.	CK	50WV	0.5

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2047	K05175330	Ceramic CAP.	RH	50WV	33pF
2048	K05172050	Ceramic CAP.	RH	50WV	5pF
2052	K05173100	Ceramic CAP.	RH	50WV	10pF
2053	K13179008	Ceramic CAP.	F	50WV	0.01uF
2054	K13179008	Ceramic CAP.	F	50WV	0.01uF
2055	K13179008	Ceramic CAP.	F	50WV	0.01uF
2056	K05175270	Ceramic CAP.	RH	50WV	27pF
2057	K40129004	Al. Electro. CAP.		16WV	10uF
2058	K13179008	Ceramic CAP.	F	50WV	0.01uF
2059	K40129004	AL. Electro. CAP.		16WV	10uF
2060	K13179008	Ceramic CAP.	F	50WV	0.01uF
2061	K00175560	Ceramic CAP.	SL	50WV	56pF
2062	K13179008	Ceramic CAP.	F	50WV	0.01uF
2063	K40129004	Al. Electro. CAP.		16WV	10uF
2064	K13179008	Ceramic CAP.	F	50WV	0.01uF
2065	K02175470	Ceramic CAP.	CH	50WV	47pF
2066	K02175560	Ceramic CAP.	CH	50WV	56pF
2067	K70167104	Tantalum CAP.		35WV	0.1uF
2068	K40109001	AL. Electro. CAP.		10WV	100uF
2069	K13179008	Ceramic CAP.	F	50WV	0.01uF
2070	K12171102	Ceramic CAP.	E	50WV	0.001uF
2071	K12171102	Ceramic CAP.	E	50WV	0.001uF
2072	K00175470	Ceramic CAP.	SL	50WV	47pF
2073	K13179014	Ceramic CAP.	F	50WV	0.0047uF
2074	K00175470	Ceramic CAP.	SL	50WV	47pF
2075	K00175101	Ceramic CAP.	SL	50WV	100pF
2076	K00175101	Ceramic CAP.	SL	50WV	100pF
2077	K12171102	Ceramic CAP.	E	50WV	0.001uF
2078	K12171102	Ceramic CAP.	E	50WV	0.001uF
2079	K12171102	Ceramic CAP.	E	50WV	0.001uF
2080	K00175101	Ceramic CAP.	SL	50WV	100pF
2081	K10179038	Ceramic CAP.	B	50WV	0.0047uF
2083	K22170229	CAP. Chip	CH	50WV	56pF
2084	K22170229	CAP. Chip	CH	50WV	56pF
2085	K22170229	CAP. Chip	CH	50WV	56pF
2086	K22170229	CAP. Chip	CH	50WV	56pF
2087	K22170229	CAP. Chip	CH	50WV	56pF
2088	K22170229	CAP. Chip	CH	50WV	56pF
2089	K22140903	CAP. Chip	D	25WV	0.022uF
2090	K22170229	CAP. Chip	CH	50WV	56pF
2091	K22170229	CAP. Chip	CH	50WV	56pF
2092	K22170817	CAP. Chip	B	50WV	0.01uF
2093	K05175150	Ceramic CAP.	RH	50WV	15pF
2094	K22170235	CAP. Chip	CH	50WV	100pF
C2001	K91000030	Variable CAP.	40pF		
2001	L0020825	Coil			
2002	L0020825	Coil			
2003	L0020825	Coil			
2004	L0020825	Coil			
2005	L0021718	Coil			
2006	L0021718	Coil			
2007	L0021736	Coil			
2008	L0021736	Coil			
2009	L0021735	Coil			
2010	L0021736	Coil			
2011	L0020825	Coil			
2012	L0020825	Coil			
2013	L0020825	Coil			
2001	L1190252	M.RFC	3.3uH		
2002	L1190258	M.RFC	10uH		
2003	L1190258	M.RFC	10uH		
2004	L1190258	M.RFC	10uH		
2005	L1190242	M.RFC	0.47uH		
2006	L0020340	Coil			
2007	L1020673	RFC			
2001	P1090255	Connector			
2002	P1090255	Connector			
2003	P0090525	Connector			
2004	P0090525	Connector			
2005	P0090527	Connector			
2006	P0090527	Connector			
2001	T9205551	Wire ASSY			
	L9190001	Ferrite Beads			

50MHz PA UNIT

Symbol No.	Part No.	Description	Device		
	F2899000	Printed Circuit Board			
	C028990AA	PCB with Components			
Q3001	G1090475	IC	M57735		
D3001	G2090337	Diode	MI308		
D3002	G2090344	Diode	1SV178		
D3003	G2090344	Diode	1SV178		
D3004	G2090377	Diode	1SS108		
D3005	G2090377	Diode	1SS108		
R3001	J31309002	RES.	1W	0.1 ohm	TJ
R3003	J01275151	Carbon Film RES.	1/2W	150 ohm	SJ
R3004	J02245103	Carbon Film RES.	1/4W	10k ohm	SJ
R3005	J02245103	Carbon Film RES.	1/4W	10k ohm	SJ
C3002	K10176102	Ceramic CAP.	B	50WV	0.001uF
C3003	K13179008	Ceramic CAP.	F	50WV	0.01uF
C3004	K40129004	AL. Electro. CAP.		16WV	10uF
C3005	K10176102	Ceramic CAP.	B	50WV	0.001uF
C3006	K13179008	Ceramic CAP.	F	50WV	0.01uF
C3007	K40129004	AL. Electro. CAP.		16WV	10uF
C3008	K10176102	Ceramic CAP.	B	50WV	0.001uF
C3009	K13179008	Ceramic CAP.	F	50WV	0.01uF
C3010	K40129004	AL. Electro. CAP.		16WV	10uF
C3011	K00175470	Ceramic CAP.	SL	50WV	47pF
C3012	K02175150	Ceramic CAP.	CH	50WV	15pF
C3013	K00175101	Ceramic CAP.	SL	50WV	100pF
C3014	K02172020	Ceramic CAP.	CK	50WV	2pF
C3015	K02175150	Ceramic CAP.	CH	50WV	15pF
C3016	K00175470	Ceramic CAP.	SL	50WV	47pF
C3017	K02172020	Ceramic CAP.	CK	50WV	2pF
C3018	K00175470	Ceramic CAP.	SL	50WV	47pF
C3019	K00175470	Ceramic CAP.	SL	50WV	47pF
C3020	K00175470	Ceramic CAP.	SL	50WV	47pF
C3021	K00175470	Ceramic CAP.	SL	50WV	47pF
C3022	K00175470	Ceramic CAP.	SL	50WV	47pF
C3023	K02179009	Ceramic CAP.	CH	50WV	22pF
C3024	K02179009	Ceramic CAP.	CH	50WV	22pF
C3025	K00175470	Ceramic CAP.	SL	50WV	47pF
C3027	K10176102	Ceramic CAP.	B	50WV	0.001uF
C3028	K10176102	Ceramic CAP.	B	50WV	0.001uF
C3029	K10176102	Ceramic CAP.	B	50WV	0.001uF
C3030	K10176102	Ceramic CAP.	B	50WV	0.001uF
C3031	K10176102	Ceramic CAP.	B	50WV	0.001uF
C3032	K10176102	Ceramic CAP.	B	50WV	0.001uF
C3034	K21170002	Feed Through CAP.		50WV	0.001uF
C3035	K21170002	Feed Through CAP.		50WV	0.001uF
C3036	K21170002	Feed Through CAP.		50WV	0.001uF
C3037	K21170002	Feed Through CAP.		50WV	0.001uF
C3038	K21170002	Feed Through CAP.		50WV	0.001uF
L3001	L1020469	RFC			
L3002	L1020469	RFC			
L3003	L1020663	RFC			
L3004	L0020824	Coil			
L3005	L0020824	Coil			
L3006	L1190238	M.RFC	0.22uH		
L3008	L0020824	Coil	0.17uH		
L3009	L0020824	Coil	0.17uH		
L3010	L1190258	M.RFC	10uH		
L3011	L1190258	M.RFC	10uH		
J3001	P1090352	Connector			
	Q5000036	TP-G	MK-1095		
	T9307003	Wire ASSY			
	T9205537	Wire ASSY			
	R4083840B	Booster Heatsink			
	R0083800B	Booster Cover A			
	R0083810B	Booster Cover B			
	R7043900	Insulator Board B			

PARTS LIST (FEX-736-220)

MAIN CHASSIS

Symbol No.	Part No.	Description	Device
Q1	G1090778	IC	L7809
	T9205536A	Wire ASSY	
	T9205549	Wire ASSY	
	T9205552	Wire ASSY	
	T9205546	Wire ASSY	
	T9317800A	Wire ASSY	
	R0083771	UNIT CHASSIS	
	R0083790B	UNIT Bottom Cover	
	R0509970B	Shield Cover	
	R8123040	Seil "220 MHz"	

220MHz PLL UNIT

Symbol No.	Part No.	Description	Device
	F2898102	Printed Circuit Board	
	C028982AA	PCB With Components: w/o 220 MHz SUB VCO UNIT	
	C028982AB	PCB With Components: w/ 220 MHz SUB VCO UNIT	
Q1001	G3801921G	FET	2SK192AGR
Q1002	G3802410G	FET	2SK241GR
Q1003	G3305350B	Transistor	2SC535B
Q1004	G3304580C	Transistor	2SC458C
Q1005	G3802410G	FET	2SK241GR
Q1006	G3305350B	Transistor	2SC535B
Q1007	G3304600B	Transistor	2SC460B
Q1008	G1090798	IC	MC145155P
Q1010	G3304600B	Transistor	2SC460B
Q1011	G3305350B	Transistor	2SC535B
Q1012	G3305350B	Transistor	2SC535B
Q1013	G3802410G	FET	2SK241GR
Q1014	G3305350B	Transistor	2SC535B
Q1015	G1090473	IC	TC5081AP
Q1019	G1090795	IC	MB504
Q1020	G1090707	IC	MC145156P
Q1022	G1090796	IC	MB505-16
Q1023	G1090247	IC	TC9122P
Q1024	G3304580C	Transistor	2SC458C
Q1025	G3304580C	Transistor	2SC458C
Q1026	G3304580C	Transistor	2SC458C
Q1027	G3304580C	Transistor	2SC458C
Q1028	G3304580C	Transistor	2SC458C
Q1029	G3304580C	Transistor	2SC458C
Q1030	G3304580C	Transistor	2SC458C
Q1031	G3304580C	Transistor	2SC458C
Q1032	G3090079	Transistor	BA1A4P
Q1033	G3090079	Transistor	BA1A4P
Q1034	G1090084	IC	uPC78L05
D1001	G2090271	Diode	1T33
D1002	G2090271	Diode	1T33
D1004	G2090408	Diode	1SS270
D1005	G2022090	Diode	1S2209
D1006	G2090384	Diode	HZ7C2
D1009	G2090408	Diode	1SS270
D1014	G2090408	Diode	1SS270
D1015	G2090408	Diode	1SS270
X1001	H0102814	XTAL	HC-49/T 20.5043 MHz
R1001	J01225474	Carbon Film RES.	1/6W 470k ohm PJ
R1002	J01225101	Carbon Film RES.	1/6W 100 ohm PJ
R1003	J01225101	Carbon Film RES.	1/6W 100 ohm PJ
R1004	J01225473	Carbon Film RES.	1/6W 47k ohm PJ
R1005	J01225470	Carbon Film RES.	1/6W 47 ohm PJ
R1006	J02225103	Carbon Film RES.	1/6W 10k ohm UJ
R1007	J02225223	Carbon Film RES.	1/6W 22k ohm UJ
R1008	J02225221	Carbon Film RES.	1/6W 220 ohm UJ
R1010	J02225470	Carbon Film RES.	1/6W 47 ohm UJ
R1011	J02225103	Carbon Film RES.	1/6W 10k ohm UJ
R1012	J02225562	Carbon Film RES.	1/6W 5.6k ohm UJ
R1013	J01225473	Carbon Film RES.	1/6W 47k ohm PJ
R1014	J02225471	Carbon Film RES.	1/6W 470 ohm UJ
R1015	J02225562	Carbon Film RES.	1/6W 5.6k ohm UJ
R1016	J02225223	Carbon Film RES.	1/6W 22k ohm
R1017	J02225102	Carbon Film RES.	1/6W 1k ohm
R1018	J02225473	Carbon Film RES.	1/6W 47k ohm
R1019	J02225101	Carbon Film RES.	1/6W 100 ohm
R1020	J02225471	Carbon Film RES.	1/6W 470 ohm
R1021	J02225103	Carbon Film RES.	1/6W 10k ohm
R1022	J01225222	Carbon Film RES.	1/6W 2.2k ohm
R1023	J02225681	Carbon Film RES.	1/6W 680 ohm
R1024	J01225471	Carbon Film RES.	1/6W 470 ohm
R1025	J02225102	Carbon Film RES.	1/6W 1k ohm
R1028	J01225472	Carbon Film RES.	1/6W 4.7k ohm
R1029	J01225333	Carbon Film RES.	1/6W 33k ohm
R1030	J01225473	Carbon Film RES.	1/6W 47k ohm
R1031	J02225102	Carbon Film RES.	1/6W 1k ohm
R1032	J02225101	Carbon Film RES.	1/6W 100 ohm
R1033	J01225560	Carbon Film RES.	1/6W 56 ohm
R1034	J01225223	Carbon Film RES.	1/6W 22k ohm
R1035	J02225562	Carbon Film RES.	1/6W 5.6k ohm
R1036	J01225681	Carbon Film RES.	1/6W 680 ohm
R1037	J01225101	Carbon Film RES.	1/6W 100 ohm
R1038	J02225223	Carbon Film RES.	1/6W 22k ohm
R1039	J01225562	Carbon Film RES.	1/6W 5.6k ohm
R1040	J02225331	Carbon Film RES.	1/6W 330 ohm
R1041	J01225560	Carbon Film RES.	1/6W 56 ohm
R1042	J01225331	Carbon Film RES.	1/6W 330 ohm
R1043	J02225473	Carbon Film RES.	1/6W 47k ohm
R1044	J02225471	Carbon Film RES.	1/6W 470 ohm
R1046	J02225562	Carbon Film RES.	1/6W 5.6k ohm
R1047	J02225223	Carbon Film RES.	1/6W 22k ohm
R1048	J02225331	Carbon Film RES.	1/6W 330 ohm
R1049	J02225102	Carbon Film RES.	1/6W 1k ohm
R1050	J02225105	Carbon Film RES.	1/6W 1M ohm
R1051	J02225560	Carbon Film RES.	1/6W 56 ohm
R1052	J01225152	Carbon Film RES.	1/6W 1.5k ohm
R1053	J02225332	Carbon Film RES.	1/6W 3.3k ohm
R1054	J02225222	Carbon Film RES.	1/6W 2.2k ohm
R1055	J01225104	Carbon Film RES.	1/6W 100k ohm
R1063	J01225560	Carbon Film RES.	1/6W 56 ohm
R1064	J02225222	Carbon Film RES.	1/6W 2.2k ohm
R1065	J01225561	Carbon Film RES.	1/6W 560 ohm
R1066	J01222221	Carbon Film RES.	1/6W 220 ohm
R1067	J01225471	Carbon Film RES.	1/6W 470 ohm
R1069	J01225560	Carbon Film RES.	1/6W 56 ohm
R1070	J01225102	Carbon Film RES.	1/6W 1k ohm
R1071	J01225560	Carbon Film RES.	1/6W 56 ohm
R1072	J01225102	Carbon Film RES.	1/6W 1k ohm
R1073	J01225562	Carbon Film RES.	1/6W 5.6k ohm
R1075	J01225102	Carbon Film RES.	1/6W 1k ohm
R1076	J01225562	Carbon Film RES.	1/6W 5.6k ohm
R1078	J02225101	Carbon Film RES.	1/6W 100 ohm
R1079	J01225473	Carbon Film RES.	1/6W 47k ohm
R1080	J01225222	Carbon Film RES.	1/6W 2.2k ohm
R1081	J01225473	Carbon Film RES.	1/6W 47k ohm
R1082	J02225222	Carbon Film RES.	1/6W 2.2k ohm
R1083	J01225473	Carbon Film RES.	1/6W 47k ohm
R1084	J01225222	Carbon Film RES.	1/6W 2.2k ohm
R1085	J02225473	Carbon Film RES.	1/6W 47k ohm
R1086	J01225222	Carbon Film RES.	1/6W 2.2k ohm
R1087	J01225473	Carbon Film RES.	1/6W 47k ohm
R1088	J01225222	Carbon Film RES.	1/6W 2.2k ohm
R1089	J01225473	Carbon Film RES.	1/6W 47k ohm
R1090	J01225222	Carbon Film RES.	1/6W 2.2k ohm
R1091	J01225102	Carbon Film RES.	1/6W 1k ohm
C1001	K06173060	Ceramic CAP.	UJ 50WV 6
C1002	K02172020	Ceramic CAP.	CK 50WV 2
C1003	K02173060	Ceramic CAP.	CH 50WV 6
C1004	K05172050	Ceramic CAP.	RH 50WV 5
C1005	K06172050	Ceramic CAP.	UJ 50WV 5
C1006	K13179014	Ceramic CAP.	F 50WV 0.0047
C1007	K40109001	AL. Electro. CAP.	10WV 100
C1008	K02179001	Ceramic CAP.	CK 50WV 1
C1009	K13179008	Ceramic CAP.	F 50WV 0.01
C1010	K02172020	Ceramic CAP.	CK 50WV 2
C1011	K13179008	Ceramic CAP.	F 50WV 0.01
C1013	K05172040	Ceramic CAP.	RJ 50WV 4
C1014	K13179008	Ceramic CAP.	F 50WV 0.01
C1015	K12171102	Ceramic CAP.	E 50WV 0.001
C1017	K02172059	Ceramic CAP.	CK 50WV 0.5
C1018	K05173100	Ceramic CAP.	RH 50WV 10
C1019	K12171102	Ceramic CAP.	E 50WV 0.001
C1020	K05173100	Ceramic CAP.	RH 50WV 10
C1022	K19149021	Ceramic CAP.	25WV 0.047
C1023	K19149021	Ceramic CAP.	25WV 0.047
C1024	K13179008	Ceramic CAP.	F 50WV 0.01
C1025	K70147105	Tantalum CAP.	50WV 1

(FEX-736-220) PARTS LIST

026	K13179008	Ceramic CAP.	F	50WV	0.01uF
027	K19149025	Ceramic CAP.		25WV	0.1uF
028	K40109001	AL. Electro. CAP.		10WV	100uF
030	K70147105	Tantalum CAP.		25WV	1uF
031	K19149021	Ceramic CAP.		25WV	0.047uF
032	K19149021	Ceramic CAP.		25WV	0.047uF
033	K12171102	Ceramic CAP.	E	50WV	0.001uF
034	K13179008	Ceramic CAP.	F	50WV	0.01uF
035	K19149025	Ceramic CAP.		25WV	0.1uF
038	K05175150	Ceramic CAP.	RH	50WV	15pF
039	K06175101	Ceramic CAP.	UJ	50WV	100pF
040	K06175101	Ceramic CAP.	UJ	50WV	100pF
041	K13179008	Ceramic CAP.	F	50WV	0.01uF
042	K40129004	AL. Electro. CAP.		16WV	10uF
043	K12171102	Ceramic CAP.	E	50WV	0.001uF
044	K02175101	Ceramic CAP.	CH	50WV	100pF
045	K13179008	Ceramic CAP.	F	50WV	0.01uF
046	K05173070	Ceramic CAP.	RH	50WV	7pF
047	K13179008	Ceramic CAP.	F	50WV	0.01uF
048	K13179008	Ceramic CAP.	F	50WV	0.01uF
049	K02179001	Ceramic CAP.	CK	50WV	1pF
050	K05173070	Ceramic CAP.	RH	50WV	7pF
051	K13179008	Ceramic CAP.	F	50WV	0.01uF
052	K13179008	Ceramic CAP.	F	50WV	0.01uF
053	K13179008	Ceramic CAP.	F	50WV	0.01uF
054	K05173060	Ceramic CAP.	RH	50WV	6pF
055	K13179008	Ceramic CAP.	F	50WV	0.01uF
056	K02172059	Ceramic CAP.	CK	50WV	0.5pF
057	K05173060	Ceramic CAP.	RH	50WV	6pF
058	K13179008	Ceramic CAP.	F	50WV	0.01uF
059	K02172020	Ceramic CAP.	CK	50WV	2pF
060	K13179008	Ceramic CAP.	F	50WV	0.01uF
061	K05172050	Ceramic CAP.	RH	50WV	5pF
062	K13179008	Ceramic CAP.	F	50WV	0.01uF
063	K40179011	AL. Electro. CAP.		50WV	3.3uF
1065	K13179014	Ceramic CAP.	F	50WV	0.0047uF
1066	K13179014	Ceramic CAP.	F	50WV	0.0047uF
1067	K19149013	Ceramic CAP.		25WV	0.01uF
1068	K40109001	AL. Electro. CAP.		10WV	100uF
1069	K19149021	Ceramic CAP.		25WV	0.047uF
1070	K70167474	Tantalum CAP.		35WV	0.47uF
1071	K19149013	Ceramic CAP.		25WV	0.01uF
1072	K12171102	Ceramic CAP.	E	50WV	0.001uF
1076	K13179014	Ceramic CAP.	F	50WV	0.0047uF
1081	K02172020	Ceramic CAP.	CK	50WV	2pF
1082	K02172020	Ceramic CAP.	CK	50WV	2pF
1084	K12171102	Ceramic CAP.	E	50WV	0.1uF
1085	K19149025	Ceramic CAP.		25WV	0.1uF
1086	K13179014	Ceramic CAP.	F	50WV	0.0047uF
1087	K12171102	Ceramic CAP.	E	50WV	0.001uF
1088	K12171102	Ceramic CAP.	E	50WV	0.001uF
1089	K40109001	AL. Electro. CAP.		10WV	100uF
1090	K19149025	Ceramic CAP.		25WV	0.1uF
1091	K13179008	Ceramic CAP.	F	50WV	0.01uF
1092	K05172050	Ceramic CAP.	RH	50WV	5pF
1093	K70167474	Tantalum CAP.		35WV	0.47uF
1094	K19149021	Ceramic CAP.		25WV	0.047uF
1097	K05173070	Ceramic CAP.	RH	50WV	7pF
1098	K12171102	Ceramic CAP.	E	50WV	0.001uF
1099	K13179014	Ceramic CAP.	F	50WV	0.0047uF
1100	K13179008	Ceramic CAP.	F	50WV	0.01uF
1101	K19149025	Ceramic CAP.		25WV	0.1uF
1102	K12171102	Ceramic CAP.	E	50WV	0.001uF
1103	K05175270	Ceramic CAP.	RH	50WV	27pF
1104	K12171102	Ceramic CAP.	E	50WV	0.001uF
1105	K05175220	Ceramic CAP.	RH	50WV	22pF
1106	K12171102	Ceramic CAP.	E	50WV	0.001uF
1107	K13179008	Ceramic CAP.	F	50WV	0.01uF
1108	K00175101	Ceramic CAP.	SL	50WV	100pF
1109	K00175101	Ceramic CAP.	SL	50WV	100pF
1110	K00175101	Ceramic CAP.	SL	50WV	100pF
1111	K00175101	Ceramic CAP.	SL	50WV	100pF
1112	K00175101	Ceramic CAP.	SL	50WV	100pF
1113	K00175101	Ceramic CAP.	SL	50WV	100pF
1114	K70167104	Tantalum CAP.		35WV	0.1uF
1115	K12171102	Ceramic CAP.	E	50WV	0.001uF
1116	K12171102	Ceramic CAP.	E	50WV	0.001uF
1117	K40109002	AL. Electro. CAP.		10WV	47uF
1118	K05173070	Ceramic CAP.	RH	50WV	7pF
1120	K70147105	Tantalum CAP.		25WV	1uF
1121	K13179008	Ceramic CAP.	F	50WV	0.01uF

C1122	K22170235	CAP. Chip	CH 50WV 100pF
T1001	L0020907	Coil	
T1002	L0021358	Coil	
T1003	L0021358	Coil	
T1004	L0020907	Coil	
T1005	L0020907	Coil	
L1001	L1190246	M. RFC	1uH
L1002	L1190246	M. RFC	1uH
L1003	L0020706	Coil	
L1004	L1190244	M. RFC	0.68uH
L1005	L1020673	RFC	
L1006	L1190270	M. RFC	100uH
L1007	L1190258	M. RFC	10uH
L1008	L1190189	M. RFC	1mH
L1009	L0020652	Coil	
L1010	L1190270	M. RFC	100uH
L1011	L1190270	M. RFC	100uH
L1012	L1190270	M. RFC	100uH
L1013	L1190228	M. RFC	680uH
L1019	L1190246	M. RFC	1uH
L1020	L1190270	M. RFC	100uH
L1021	L1190270	M. RFC	100uH
L1022	L1190270	M. RFC	100uH
L1023	L1190257	M. RFC	8.2uH
L1024	L1190257	M. RFC	8.2uH
L1026	L0021359	Coil	
L1027	L0021359	Coil	
J1001	P0090525	Connector	
J1002	P0090527	Connector	
P1001	T9205550	Wire ASSY	
TP1001	Q5000036	TP-G	MK-1095
TP1002	Q5000036	TP-G	MK-1095
	R0083860D	Shield Case	
	R0510040	Shield Cover	
	R0083880	Shield Bottom Cover	
	R0062770B	VCO Case A	
	R0062780A	VCO Case Lid	
	R0123550	Leaf Spring	
	R0110610	Spring Board	

220MHz SUB VCO UNIT

Symbol No.	Part No.	Description	Device
	F2928000	Printed Circuit Board	
	C029280AB	PCB With Component	
Q1016	G3805070F	FET	2SK507F
Q1017	G3333550	Transistor	2SC3355
D1007	G2090180	Diode	FC53M-5
D1008	G2090180	Diode	FC53M-5
R1056	J02225330	Carbon Film RES.	1/6W 33 ohm UJ
R1057	J01225221	Carbon Film RES.	1/6W 220 ohm PJ
R1058	J02225332	Carbon Film RES.	1/6W 3.3k ohm UJ
R1059	J02225103	Carbon Film RES.	1/6W 10k ohm UJ
R1060	J02225101	Carbon Film RES.	1/6W 100 ohm UJ
R1061	J01225101	Carbon Film RES.	1/6W 100 ohm PJ
R1068	J01225102	Carbon Film RES.	1/6W 1k ohm PJ
C1073	K05175180	Ceramic CAP.	RH 50WV 18pF
C1074	K12171121	Ceramic CAP.	E 50WV 0.001uF
C1075	K40109001	AL. Electro. CAP.	10WV 100uF
C1077	K05173100	Ceramic CAP.	UJ 50WV 10pF
C1078	K05173080	Ceramic CAP.	RH 50WV 8pF
C1079	K02172059	Ceramic CAP.	CK 50WV 0.5pF
C1080	K13179014	Ceramic CAP.	F 50WV 0.0047uF
C1083	K22171002	CAP. Chip	F 50WV 0.0047uF
C1095	K19149021	Ceramic CAP.	25WV 0.047uF
C1096	K12171102	Ceramic CAP.	E 50WV 0.001uF
L1014	L1190242	M. RFC	0.47uH
L1015	L1190242	M. RFC	0.47uH
L1016	L0190138	Coil	
L1017	L0021520	Coil	
L1018	L1190242	M. RFC	0.47uH
L1025	L0020852	Coil	

PARTS LIST (FEX-736-220)

	L9190001	Ferrite Beads	

220MHz RF UNIT

Symbol No.	Part No.	Description	Device
	F2898101	Printed Circuit Board	
	C028981AA	PCB With Component	
Q2001	G4801220L	FET	3SK122L
Q2002	G2090247	Diode	ND487C1-3R
Q2003	G4801220L	FET	3SK122L
Q2004	G4800810	FET	3SK81
Q2005	G3115280	Transistor	2SA1528
Q2006	G3802410G	FET	2SK241GR
Q2007	G3802410G	FET	2SK241GR
Q2008	G4801220L	FET	3SK122L
Q2009	G2090135	Diode	ND487C2-3R
Q2010	G3333550	Transistor	2SC3355
Q2011	G3090050	Transistor	2SC2407(1)
Q2012	G3207720Q	Transistor	2SB772Q
Q2013	G3207720Q	Transistor	2SB772Q
Q2014	G1090606	IC	LA6358
Q2015	G3115280	Transistor	2SA1528
Q2016	G3090079	Transistor	BA1A4P
Q2018	G3305350B	Transistor	2SC535B
Q2019	G3305350B	Transistor	2SC535B
Q2020	G3801250	FET	2SK125
D2001	G2060004	Diode	1SS270TJ
D2002	G2090027	Diode	1SS53
D2003	G2090027	Diode	1SS53
D2004	G2060004	Diode	1SS270TJ
D2005	G2090027	Diode	1SS53
D2006	G2090027	Diode	1SS53
D2007	G2060004	Diode	1SS270TJ
D2008	G2090027	Diode	1SS53
D2009	G2090027	Diode	1SS53
D2010	G2015550	Diode	1S1555
D2011	G2060004	Diode	1SS270TJ
D2012	G2060004	Diode	1SS270TJ
D2013	G2060004	Diode	1SS270TJ
D2014	G2060004	Diode	1SS270TJ
D2015	G2060004	Diode	1SS270TJ
D2016	G2060004	Diode	1SS270TJ
D2017	G2060004	Diode	1SS270TJ
D2018	G2060004	Diode	1SS270TJ
TH2001	G9090026	Thermistor	
TH2002	G9090020	Thermistor	
XF2001	H1102122	XTAL Filter	47M20A1
R2001	J01225473	Carbon Film RES.	1/6W 47k ohm PJ
R2002	J01225225	Carbon Film RES.	1/6W 2.2M ohm PJ
R2003	J01225470	Carbon Film RES.	1/6W 47 ohm PJ
R2004	J01225102	Carbon Film RES.	1/6W 1k ohm PJ
R2005	J01225470	Carbon Film RES.	1/6W 47 ohm PJ
R2006	J01225151	Carbon Film RES.	1/6W 150 ohm PJ
R2007	J01225331	Carbon Film RES.	1/6W 330 ohm PJ
R2008	J01225180	Carbon Film RES.	1/6W 18 ohm PJ
R2009	J01225331	Carbon Film RES.	1/6W 330 ohm PJ
R2010	J01225473	Carbon Film RES.	1/6W 47k ohm PJ
R2011	J01225473	Carbon Film RES.	1/6W 47k ohm PJ
R2012	J01225473	Carbon Film RES.	1/6W 47k ohm PJ
R2013	J01225470	Carbon Film RES.	1/6W 47 ohm PJ
R2014	J01225470	Carbon Film RES.	1/6W 47 ohm PJ
R2015	J01225473	Carbon Film RES.	1/6W 47k ohm PJ
R2016	J01225473	Carbon Film RES.	1/6W 47k ohm PJ
R2017	J01225470	Carbon Film RES.	1/6W 47 ohm PJ
R2018	J01225471	Carbon Film RES.	1/6W 470 ohm PJ
R2019	J01225470	Carbon Film RES.	1/6W 47 ohm PJ
R2020	J01225221	Carbon Film RES.	1/6W 220 ohm PJ
R2021	J01225820	Carbon Film RES.	1/6W 82 ohm PJ
R2022	J01225221	Carbon Film RES.	1/6W 220 ohm PJ
R2023	J01225101	Carbon Film RES.	1/6W 100 ohm PJ
R2024	J01225470	Carbon Film RES.	1/6W 47 ohm PJ
R2025	J01225560	Carbon Film RES.	1/6W 56 ohm PJ
R2026	J01225473	Carbon Film RES.	1/6W 47k ohm PJ
R2027	J01225473	Carbon Film RES.	1/6W 47k ohm PJ
R2028	J01225333	Carbon Film RES.	1/6W 33k ohm PJ
R2029	J01225473	Carbon Film RES.	1/6W 47k ohm PJ
R2030	J01225223	Carbon Film RES.	1/6W 22k ohm PJ
R2031	J01225470	Carbon Film RES.	1/6W 47 ohm PJ
R2032	J01225222	Carbon Film RES.	1/6W 2.2k ohm PJ
R2033	J01225331	Carbon Film RES.	1/6W 330 ohm PJ
R2034	J01225180	Carbon Film RES.	1/6W 18 ohm
R2035	J01225331	Carbon Film RES.	1/6W 330 ohm
R2036	J01225102	Carbon Film RES.	1/6W 1k ohm
R2037	J01225221	Carbon Film RES.	1/6W 220 ohm
R2038	J01225220	Carbon Film RES.	1/6W 22 ohm
R2039	J01225100	Carbon Film RES.	1/6W 10 ohm
R2040	J01225102	Carbon Film RES.	1/6W 1k ohm
R2041	J01225103	Carbon Film RES.	1/6W 10k ohm
R2042	J02225471	Carbon Film RES.	1/2W 470 ohm
R2043	J02225103	Carbon Film RES.	1/6W 10k ohm
R2044	J01275471	Carbon Film RES.	1/6W 470 ohm
R2045	J01225473	Carbon Film RES.	1/6W 47k ohm
R2046	J01225223	Carbon Film RES.	1/6W 22k ohm
R2047	J01225223	Carbon Film RES.	1/6W 22k ohm
R2048	J01225104	Carbon Film RES.	1/6W 100k ohm
R2049	J01225473	Carbon Film RES.	1/6W 47k ohm
R2050	J01225223	Carbon Film RES.	1/6W 22k ohm
R2051	J01225103	Carbon Film RES.	1/6W 10k ohm
R2052	J01225223	Carbon Film RES.	1/6W 22k ohm
R2057	J01225223	Carbon Film RES.	1/6W 22k ohm
R2058	J01225472	Carbon Film RES.	1/6W 4.7k ohm
R2059	J01225102	Carbon Film RES.	1/6W 1k ohm
R2060	J01225101	Carbon Film RES.	1/6W 100 ohm
R2061	J01225470	Carbon Film RES.	1/6W 47 ohm
R2062	J01225682	Carbon Film RES.	1/6W 6.8k ohm
R2063	J01225223	Carbon Film RES.	1/6W 22k ohm
R2064	J01225102	Carbon Film RES.	1/6W 1k ohm
R2065	J01225101	Carbon Film RES.	1/6W 100 ohm
R2066	J01225222	Carbon Film RES.	1/6W 2.2k ohm
R2067	J01225560	Carbon Film RES.	1/6W 56 ohm
R2068	J01225560	Carbon Film RES.	1/6W 56 ohm
R2069	J01225221	Carbon Film RES.	1/6W 220 ohm
R2070	J24205104	RES. Chip	1/10W 100k ohm
R2071	J24205560	RES. Chip	1/10W 56 ohm
R2072	J24205104	RES. Chip	1/10W 100k ohm
R2073	J01225331	Carbon Film RES.	1/6W 330 ohm
C2001	K00175470	Ceramic CAP.	SL 50WV 4
C2003	K13179008	Ceramic CAP.	F 50WV 0.0
C2004	K12171102	Ceramic CAP.	E 50WV 0.00
C2005	K13179008	Ceramic CAP.	F 50WV 0.0
C2006	K13179008	Ceramic CAP.	F 50WV 0.0
C2007	K13179008	Ceramic CAP.	F 50WV 0.0
C2008	K13179008	Ceramic CAP.	F 50WV 0.0
C2009	K02172020	Ceramic CAP.	CK 50WV
C2010	K12171102	Ceramic CAP.	E 50WV 0.00
C2011	K13179014	Ceramic CAP.	F 50WV 0.004
C2013	K12171102	Ceramic CAP.	E 50WV 0.00
C2014	K13179008	Ceramic CAP.	F 50WV 0.0
C2015	K10179024	Ceramic CAP.	B 50WV 0.0
C2016	K13179008	Ceramic CAP.	F 50WV 0.0
C2017	K00175220	Ceramic CAP.	SL 50WV 2
C2018	K12171102	Ceramic CAP.	E 50WV 0.00
C2019	K13179008	Ceramic CAP.	F 50WV 0.0
C2020	K05175150	Ceramic CAP.	RH 50WV 1
C2021	K02173100	Ceramic CAP.	CH 50WV 1
C2022	K13179008	Ceramic CAP.	F 50WV 0.0
C2023	K13179014	Ceramic CAP.	F 50WV 0.004
C2024	K13179008	Ceramic CAP.	F 50WV 0.0
C2025	K13179014	Ceramic CAP.	F 50WV 0.004
C2026	K13179008	Ceramic CAP.	F 50WV 0.01
C2027	K00173060	Ceramic CAP.	SL 50WV
C2028	K00173060	Ceramic CAP.	SL 50WV
C2029	K13179008	Ceramic CAP.	F 50WV 0.01
C2030	K13179008	Ceramic CAP.	F 50WV 0.01
C2031	K13179008	Ceramic CAP.	F 50WV 0.01
C2032	K02173100	Ceramic CAP.	CH 50WV 1
C2033	K02172050	Ceramic CAP.	CH 50WV
C2034	K13179008	Ceramic CAP.	F 50WV 0.01
C2035	K13179008	Ceramic CAP.	F 50WV 0.01
C2036	K13179008	Ceramic CAP.	F 50WV 0.01
C2038	K12171102	Ceramic CAP.	E 50WV 0.001
C2039	K12171102	Ceramic CAP.	E 50WV 0.001
C2040	K13179014	Ceramic CAP.	F 50WV 0.0047
C2042	K05173060	Ceramic CAP.	RH 50WV 6
C2043	K13179008	Ceramic CAP.	F 50WV 0.01
C2044	K13179008	Ceramic CAP.	F 50WV 0.01
C2045	K05172030	Ceramic CAP.	RJ 50WV 3
C2046	K05173090	Ceramic CAP.	RH 50WV 9
C2047	K40129004	AL. Electro. CAP.	16WV 10
C2048	K13179008	Ceramic CAP.	F 50WV 0.01
C2049	K13179008	Ceramic CAP.	F 50WV 0.01
C2050	K40129004	AL. Electro. CAP.	16WV 10
C2051	K13179008	Ceramic CAP.	F 50WV 0.01

(FEX-736-220) PARTS LIST

2052	K40129004	AL. Electro. CAP.		16WV	10uF
2053	K13179008	Ceramic CAP.	F	50WV	0.01uF
2054	K00173060	Ceramic CAP.	RH	50WV	6pF
2055	K05175120	Ceramic CAP.	RH	50WV	12pF
2056	K40109001	AL. Electro. CAP.		10WV	100uF
2057	K70167104	Tantalum CAP.		35WV	0.1uF
2058	K13179008	Ceramic CAP.	F	50WV	0.01uF
2059	K12171102	Ceramic CAP.	E	50WV	0.001uF
2060	K12171102	Ceramic CAP.	E	50WV	0.001uF
2061	K00175470	Ceramic CAP.	SL	50WV	47pF
2062	K13179008	Ceramic CAP.	F	50WV	0.01uF
2063	K00175470	Ceramic CAP.	SL	50WV	47pF
2064	K10176101	Ceramic CAP.	B	50WV	100pF
2065	K10176101	Ceramic CAP.	B	50WV	100pF
2066	K12171102	Ceramic CAP.	E	50WV	0.001uF
2067	K12171102	Ceramic CAP.	E	50WV	0.001uF
2068	K12171102	Ceramic CAP.	E	50WV	0.001uF
2069	K10176101	Ceramic CAP.	B	50WV	100pF
2070	K00173100	Ceramic CAP.	SL	50WV	10pF
2072	K12171102	Ceramic CAP.	E	50WV	0.001uF
2073	K13179008	Ceramic CAP.	F	50WV	0.01uF
2074	K13179008	Ceramic CAP.	F	50WV	0.01uF
2075	K13179008	Ceramic CAP.	F	50WV	0.01uF
2076	K02172059	Ceramic CAP.	CK	50WV	0.5pF
2077	K00175470	Ceramic CAP.	SL	50WV	47pF
2078	K13179008	Ceramic CAP.	F	50WV	0.01uF
2079	K13179008	Ceramic CAP.	F	50WV	0.01uF
2080	K13179008	Ceramic CAP.	F	50WV	0.01uF
2081	K13179008	Ceramic CAP.	F	50WV	0.01uF
2082	K13179008	Ceramic CAP.	F	50WV	0.01uF
2083	K13179008	Ceramic CAP.	F	50WV	0.01uF
2084	K13179008	Ceramic CAP.	F	50WV	0.01uF
2085	K13179008	Ceramic CAP.	F	50WV	0.01uF
2086	K13179008	Ceramic CAP.	F	50WV	0.01uF
2087	K02172059	Ceramic CAP.	CK	50WV	0.5pF
2088	K02172059	Ceramic CAP.	CK	50WV	0.5pF
2089	K02173060	Ceramic CAP.	CH	50WV	6pF
2090	K22170239	CAP. Chip	CH	50WV	150pF
2091	K22170239	CAP. Chip	CH	50WV	150pF
2092	K22140803	CAP. Chip	B	25WV	0.01uF
2093	K05172030	Ceramic CAP.	RJ	50WV	3pF
2094	K02179009	Ceramic CAP.	CH	50WV	22pF
2095	K13179009	Ceramic CAP.	F	50WV	0.047uF
C2002	K91000028	Variable CAP.	10pF		
2001	L0021748	Coil			
2002	L0021718	Coil			
2003	L0021718	Coil			
2004	L0021740	Coil			
2005	L0021740	Coil			
2006	L0021740	Coil			
2007	L0021165	Coil			
2008	L0021735	Coil			
2009	L0021735	Coil			
2010	L0021736	Coil			
2011	L0021740	Coil			
2012	L0021740	Coil			
2013	L0021740	Coil			
2014	L0021718	Coil			
2015	L0021718	Coil			
2016	L0021165	Coil			
2017	L0021165	Coil			
2018	L0021165	Coil			
2001	L0021457	Coil			
2002	L1190246	M. RFC	1uH		
2003	L1190258	M. RFC	10uH		
2004	L1190246	M. RFC	1uH		
2005	L0020342	Coil			
2006	L0020340	Coil			
2007	L0020725	Coil			
2009	L0020852	Coil			
2010	L1020673	RFC			
2011	L0020852	Coil			
2012	L1190244	M. RFC	0.68uH		
V2001	L4020085	Helical Resonator			
V2002	L4020085	Helical Resonator			
2001	P1090255	Connector			
2002	P1090255	Connector			
2003	P0090525	Connector			
2004	P0090525	Connector			
2005	P0090527	Connector			
2006	P0090527	Connector			
2007	P1090210	Connector			
2008	P1090210	Connector			
2001	T9205551	Wire ASSY			
	R0056640	PLL IF Shield			

220MHz PA UNIT

Symbol No.	Part No.	Description	Device		
	F2899000	Printed Circuit Board			
	C028990AB	PCB With Components			
Q3001	G1090797	IC	M67712		
D3001	G2090337	Diode	MI308		
D3002	G2090344	Diode	1SV178		
D3003	G2090344	Diode	1SV178		
D3004	G2090118	Diode	1SS97		
D3005	G2090118	Diode	1SS97		
R3001	J31309002	RES.	1W	0.1 ohm	
R3002	J31309002	RES.	1W	0.1 ohm	
R3003	J01275151	Carbon Film RES.	1/2W	150 ohm	TJ
R3004	J02245103	Carbon Film RES.	1/4W	10k ohm	SJ
R3005	J02245103	Carbon Film RES.	1/4W	10k ohm	SJ
C3002	K10176102	Ceramic CAP.	B	50WV	0.001uF
C3003	K13179008	Ceramic CAP.	F	50WV	0.01uF
C3004	K40129004	AL. Electro. CAP.		16WV	10uF
C3005	K10176102	Ceramic CAP.	B	50WV	0.001uF
C3006	K13179008	Ceramic CAP.	F	50WV	0.01uF
C3007	K40129004	AL. Electro. CAP.		16WV	10uF
C3008	K10176102	Ceramic CAP.	B	50WV	0.001uF
C3009	K13179008	Ceramic CAP.	F	50WV	0.01uF
C3010	K40129004	AL. Electro. CAP.		16WV	10uF
C3011	K02173100	Ceramic CAP.	CH	50WV	10pF
C3013	K02175180	Ceramic CAP.	CH	50WV	18pF
C3014	K02179001	Ceramic CAP.	CK	50WV	1pF
C3016	K02173100	Ceramic CAP.	CH	50WV	10pF
C3017	K02179001	Ceramic CAP.	CK	50WV	1pF
C3018	K02173100	Ceramic CAP.	CH	50WV	10pF
C3019	K02173100	Ceramic CAP.	CH	50WV	10pF
C3020	K02173100	Ceramic CAP.	CH	50WV	10pF
C3021	K02173100	Ceramic CAP.	CH	50WV	10pF
C3022	K02173100	Ceramic CAP.	CH	50WV	10pF
C3023	K02173100	Ceramic CAP.	CH	50WV	10pF
C3024	K02173100	Ceramic CAP.	CH	50WV	10pF
C3025	K02173150	Ceramic CAP.	CH	50WV	15pF
C3027	K10176102	Ceramic CAP.	B	50WV	0.001uF
C3028	K10176102	Ceramic CAP.	B	50WV	0.001uF
C3029	K10176102	Ceramic CAP.	B	50WV	0.001uF
C3030	K10176102	Ceramic CAP.	B	50WV	0.001uF
C3031	K10176102	Ceramic CAP.	B	50WV	0.001uF
C3032	K10176102	Ceramic CAP.	B	50WV	0.001uF
C3034	K21170002	Feed Through CAP.		50WV	0.001uF
C3035	K21170002	Feed Through CAP.		50WV	0.001uF
C3036	K21170002	Feed Through CAP.		50WV	0.001uF
C3037	K21170002	Feed Through CAP.		50WV	0.001uF
C3038	K21170002	Feed Through CAP.		50WV	0.001uF
L3001	L1020469	RFC			
L3002	L1020469	RFC			
L3003	L1020663	RFC			
L3004	L0021647	Coil			
L3005	L0021647	Coil			
L3006	L0021149	Coil			
L3007	L0021647	Coil			
L3008	L0021647	Coil			
L3009	L0021647	Coil			
L3010	L1190250	M. RFC	2.2uH		
L3011	L1190250	M. RFC	2.2uH		
J3001	P1090352	Connector			

	Q5000036	TP-G	MK-1095
	T9307003	Wire ASSY	
	T9205537	Wire ASSY	
	S6000138	Beads	
	R4083840B	Booster Heatsink	
	R0083800B	Booster Cover A	
	R0083810B	Booster Cover B	
	R7043900	Insulator Board B	

PARTS LIST (FEX-736-1.2)

MAIN CHASSIS

Symbol No.	Part No.	Description	Device
	R0804800	Chassis	
	R0511100A	Shield Cover	
	R0511110	Shield Cover	
	R8123060	Seal	
	R0124540	Heatsink Plate	
	S5000057	Lead Clamper	L=38

1200MHz PLL UNIT

Symbol No.	Part No.	Description	Device
	F2951000A	Printed Circuit Board	
	C029510AA	PCB with Components: Vers. F	
	C029510AB	PCB with Components: Vers. A	
	C029510AC	PCB with Components: Vers. B	
Q1001	G3316237F	Transistor	2SC1623 T2BL6
Q1002	G3316237F	Transistor	2SC1623 T2BL6
Q1003	G3316237F	Transistor	2SC1623 T2BL6
Q1004	G3316237F	Transistor	2SC1623 T2BL6
Q1005	G3316237F	Transistor	2SC1623 T2BL6
Q1006	G3316237F	Transistor	2SC1623 T2BL6
Q1007	G3316237F	Transistor	2SC1623 T2BL6
Q1008	G3316237F	Transistor	2SC1623 T2BL6
Q1009	G3327127G	Transistor	2SC2712GR TE85R
Q1010	G3327127G	Transistor	2SC2712GR TE85R
Q1011	G1090824	IC	MB504L
Q1012	G1090707	IC	MC145156L
Q1013	G3805070F	FET	2SK507F
Q1014	G3331207	Transistor	2SC3120 TE85R
Q1015	G3331207	Transistor	2SC3120 TE85R
Q1016	G3331207	Transistor	2SC3120 TE85R
Q1017	G1090796	IC	MB505-16
Q1018	G3316237F	Transistor	2SC1623 T2BL6
Q1019	G3803027Y	FET	2SK302Y TE85R
Q1020	G1090247	IC	TC9122P
Q1021	G3326207B	Transistor	2SC2620 QB
Q1022	G1090072	IC	uPC577H
Q1023	G1090473	IC	TC5081AP
Q1024	G3326207B	Transistor	2SC2620 QB
Q1025	G3803027Y	FET	2SK302Y
Q1026	G3331207	Transistor	2SC3120 TE85R
Q1027	G1090653	IC	uPC1651G
Q1028	G1090822	IC	uPC1659G
Q1029	G4801657O	FET	3SK165-O-T7
Q1030	G1090653	IC	uPC1651G
Q1031	G1090860	IC	MB503
Q1032	G3108127F	Transistor	2SA812 T2BM6B
Q1033	G1090707	IC	MC145156P
Q1034	G3333567	Transistor	2SC3356 T2B
Q1035	G3327127G	Transistor	2SC2712GR TE85R
Q1036	G1090739	IC	MC145163SL
Q1037	G1090292	IC	uPB551C
Q1038	G3801921G	FET	2SK192AGR
Q1039	G3326207B	Transistor	2SC2620QB
Q1040	G3326207B	Transistor	2SC2620QB
Q1041	G1090299	IC	uPC7805H
D1001	G2090408	Diode	1SS270
D1002	G2090408	Diode	1SS270
D1003(F)	G2090408	Diode	1SS270
D1004 (A,B)	G2090408	Diode	1SS270
D1005	G2090408	Diode	1SS270
D1006	G2090408	Diode	1SS270
D1007(B)	G2090408	Diode	1SS270
D1008	G2090408	Diode	1SS270
D1009	G2090271	Diode	1T33
D1010	G2090271	Diode	1T33
D1011	G2090384	Diode	HZ7C2
D1012	G2022080	Diode	1S2208
D1013	G2090248	Diode	1T32
X1001	H0102844	XTAL	HC-49/U-3P 71.690 MHz
XM1001	Q7000072	VCO Module	ENF-VCO 06A01
R1001	J24205474	RES. Chip	1/10W 470k ohm
R1002	J24205474	RES. Chip	1/10W 470k ohm
R1003	J24205474	RES. Chip	1/10W 470k ohm
R1004	J24205474	RES. Chip	1/10W 470k ohm
R1005	J24205474	RES. Chip	1/10W 470k ohm
R1006	J24205474	RES. Chip	1/10W 470k ohm
R1007	J24205333	RES. Chip	1/10W 33k ohm
R1008	J24205333	RES. Chip	1/10W 33k ohm
R1009	J24205333	RES. Chip	1/10W 33k ohm
R1010	J24205333	RES. Chip	1/10W 33k ohm
R1011	J24205333	RES. Chip	1/10W 33k ohm
R1012	J24205333	RES. Chip	1/10W 33k ohm
R1013	J24205102	RES. Chip	1/10W 1k ohm
R1014	J24205562	RES. Chip	1/10W 5.6k ohm
R1015	J24205101	RES. Chip	1/10W 100 ohm
R1016	J24205102	RES. Chip	1/10W 1k ohm
R1017	J24205562	RES. Chip	1/10W 5.6k ohm
R1018	J01225101	Carbon Film RES.	1/6W 100 ohm
R1019	J24205102	RES. Chip	1/10W 1k ohm
R1020	J24205222	RES. Chip	1/10W 2.2k ohm
R1021	J24205103	RES. Chip	1/10W 10k ohm
R1022	J24205103	RES. Chip	1/10W 10k ohm
R1023	J24205152	RES. Chip	1/10W 1.5k ohm
R1024	J24205222	RES. Chip	1/10W 2.2k ohm
R1025	J01225471	Carbon Film RES.	1/6W 470 ohm
R1026	J24205102	RES. Chip	1/10W 1k ohm
R1027	J24205104	RES. Chip	1/10W 100k ohm
R1028	J24205104	RES. Chip	1/10W 100k ohm
R1029	J24205330	RES. Chip	1/10W 33 ohm
R1030	J24205221	RES. Chip	1/10W 220 ohm
R1031	J24205103	RES. Chip	1/10W 10k ohm
R1032	J24205332	RES. Chip	1/10W 3.3k ohm
R1033	J24205471	RES. Chip	1/10W 470 ohm
R1034	J24205152	RES. Chip	1/10W 1.5k ohm
R1035	J24205470	RES. Chip	1/10W 47 ohm
R1036	J24205683	RES. Chip	1/10W 68k ohm
R1037	J24205221	RES. Chip	1/10W 220 ohm
R1038	J24205102	RES. Chip	1/10W 1k ohm
R1039	J24205683	RES. Chip	1/10W 68k ohm
R1040	J24205221	RES. Chip	1/10W 220 ohm
R1041	J24205222	RES. Chip	1/10W 2.2k ohm
R1042	J24205101	RES. Chip	1/10W 100 ohm
R1043	J24205223	RES. Chip	1/10W 22k ohm
R1044	J24205222	RES. Chip	1/10W 2.2k ohm
R1045	J24205101	RES. Chip	1/10W 100 ohm
R1046	J24205101	RES. Chip	1/10W 100 ohm
R1047	J24205102	RES. Chip	1/10W 1k ohm
R1048	J24205101	RES. Chip	1/10W 100 ohm
R1049	J24205102	RES. Chip	1/10W 1k ohm
R1050	J24205562	RES. Chip	1/10W 5.6k ohm
R1051	J24205102	RES. Chip	1/10W 1k ohm
R1052	J24205332	RES. Chip	1/10W 3.3k ohm
R1053	J24205560	RES. Chip	1/10W 56 ohm
R1054	J24205472	RES. Chip	1/10W 4.7k ohm
R1055	J24205103	RES. Chip	1/10W 10k ohm
R1056	J24205222	RES. Chip	1/10W 2.2k ohm
R1057	J24205104	RES. Chip	1/10W 100k ohm
R1058	J24205222	RES. Chip	1/10W 2.2k ohm
R1059	J24205472	RES. Chip	1/10W 4.7k ohm
R1060	J24205472	RES. Chip	1/10W 4.7k ohm
R1061	J24205152	RES. Chip	1/10W 1.5k ohm
R1062	J24205101	RES. Chip	1/10W 100 ohm
R1063	J01225470	Carbon Film RES.	1/6W 47 ohm
R1064	J24205471	RES. Chip	1/10W 470 ohm
R1065	J24205471	RES. Chip	1/10W 470 ohm
R1066	J24205102	RES. Chip	1/10W 1k ohm
R1067	J24205472	RES. Chip	1/10W 4.7k ohm
R1068	J24205330	RES. Chip	1/10W 33 ohm
R1069	J24205221	RES. Chip	1/10W 220 ohm
R1070	J01225100	Carbon Film RES.	1/6W 10 ohm
R1071	J24205101	RES. Chip	1/10W 100 ohm
R1072	J24205471	RES. Chip	1/10W 470 ohm
R1073	J01225470	Carbon Film RES.	1/6W 47 ohm
R1074	J24205101	RES. Chip	1/10W 100 ohm
R1075	J24205222	RES. Chip	1/10W 2.2k ohm
R1076	J24205103	RES. Chip	1/10W 10k ohm
R1077	J24205103	RES. Chip	1/10W 10k ohm
R1078	J01225104	Carbon Film RES.	1/6W 100k ohm
R1079	J24205473	RES. Chip	1/10W 47k ohm
R1080	J24205103	RES. Chip	1/10W 10k ohm
R1081	J24205152	RES. Chip	1/10W 1.5k ohm
R1082	J24205681	RES. Chip	1/10W 680 ohm
R1083	J01225151	Carbon Film RES.	1/6W 150 ohm
R1084	J24205102	RES. Chip	1/10W 1k ohm
R1085	J01225470	Carbon Film RES.	1/6W 47 ohm
R1086	J24205181	RES. Chip	1/10W 180 ohm
R1087	J24205680	RES. Chip	1/10W 68 ohm
R1088	J24205331	RES. Chip	1/10W 330 ohm

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1089	J24205182	RES. Chip	1/10W 1.8k ohm		
1090	J01225331	Carbon Film RES.	1/6W 330 ohm		
1091	J24205102	RES. Chip	1/10W 1k ohm		
1092	J24205562	RES. Chip	1/10W 5.6k ohm		
1093	J24205101	RES. Chip	1/10W 100 ohm		
1094	J24205151	RES. Chip	1/10W 150 ohm		
1095	J24205222	RES. Chip	1/10W 2.2k ohm		
1096	J01225334	Carbon Film RES.	1/6W 330k ohm		PJ
1097	J24205104	RES. Chip	1/10W 100k ohm		
1098	J01225101	Carbon Film RES.	1/6W 100 ohm		PJ
1099	J24205221	RES. Chip	1/10W 220 ohm		
1100	J24205103	RES. Chip	1/10W 10k ohm		
1101	J24205103	RES. Chip	1/10W 10k ohm		
1102	J24205101	RES. Chip	1/10W 100 ohm		
1103	J24205471	RES. Chip	1/10W 470 ohm		
1104	J24205103	RES. Chip	1/10W 10k ohm		
1105	J24205101	RES. Chip	1/10W 100 ohm		
1106	J24205103	RES. Chip	1/10W 10k ohm		
1107	J24205222	RES. Chip	1/10W 2.2k ohm		
1108	J24205223	RES. Chip	1/10W 22k ohm		
1109	J01225151	Carbon Film RES.	1/6W 150 ohm		PJ
1110	J24205101	RES. Chip	1/10W 100 ohm		
1111	J24205000	RES. Chip	1/10W 0 ohm		
1112	J24205000	RES. Chip	1/10W 0 ohm		
1113	J24205000	RES. Chip	1/10W 0 ohm		
1114	J24205103	RES. Chip	1/10W 10k ohm		
1115	J24205103	RES. Chip	1/10W 10k ohm		
1001	K22170235	CAP. Chip	CH	50WV	100pF
1002	K22170235	CAP. Chip	CH	50WV	100pF
1003	K22170235	CAP. Chip	CH	50WV	100pF
1004	K22170235	CAP. Chip	CH	50WV	100pF
1005	K22170235	CAP. Chip	CH	50WV	100pF
1006	K22170235	CAP. Chip	CH	50WV	100pF
1007	K22170235	CAP. Chip	CH	50WV	100pF
1008	K22170235	CAP. Chip	CH	50WV	100pF
1009	K22170235	CAP. Chip	CH	50WV	100pF
1010	K22170235	CAP. Chip	CH	50WV	100pF
1011	K22170235	CAP. Chip	CH	50WV	100pF
1012	K22170235	CAP. Chip	CH	50WV	100pF
1013	K22170235	CAP. Chip	CH	50WV	100pF
1014	K22170235	CAP. Chip	CH	50WV	100pF
1015	K22170235	CAP. Chip	CH	50WV	100pF
1016	K22170235	CAP. Chip	CH	50WV	100pF
1017	K22170219	CAP. Chip	CH	50WV	22pF
1018	K22170229	CAP. Chip	CH	50WV	56pF
1019	K22170817	CAP. Chip	B	50WV	0.01uF
1020	K22170211	CAP. Chip	CH	50WV	10pF
1021	K22170229	CAP. Chip	CH	50WV	56pF
1022	K22170817	CAP. Chip	B	50WV	0.01uF
1023	K22170813	CAP. Chip	B	50WV	0.0047uF
1024	K22141809	CAP. Chip	B	25WV	0.1uF
1025	K22170805	CAP. Chip	B	50WV	0.01uF
1026	K22170805	CAP. Chip	B	50WV	0.01uF
1027	K22170805	CAP. Chip	B	50WV	0.01uF
1028	K40109024	AL. Electro. CAP.		10WV	100uF
1029	K22141809	CAP. Chip	B	25WV	0.1uF
1030	K22170817	CAP. Chip	B	50WV	0.01uF
1031	K22170805	CAP. Chip	B	50WV	0.001uF
1032	K70167334	Tantalum CAP.		35WV	0.33uF
1033	K19149021	Ceramic CAP.		25WV	0.047uF
1034	K19149021	Ceramic CAP.		25WV	0.047uF
1035	K22170817	CAP. Chip	B	50WV	0.01uF
1036	K22170805	CAP. Chip	B	50WV	0.001uF
1037	K40109024	AL. Electro. CAP.		10WV	100uF
1038	K22170813	CAP. Chip	B	50WV	0.0047uF
1039	K22170209	CAP. Chip	CH	50WV	8pF
1040	K22170215	CAP. Chip	CH	50WV	15pF
1041	K22170201	CAP. Chip	CH	50WV	0.5pF
1042	K22170205	CAP. Chip	CH	50WV	4pF
1043	K22170813	CAP. Chip	B	50WV	0.0047uF
1044	K22170203	CAP. Chip	CH	50WV	2pF
1045	K22170203	CAP. Chip	CH	50WV	2pF
1046	K22170813	CAP. Chip	B	50WV	0.0047uF
1047	K22170813	CAP. Chip	B	50WV	0.0047uF
1048	K22141809	CAP. Chip	B	25WV	0.1uF
1049	K22141809	CAP. Chip	B	25WV	0.1uF
1050	K22170813	CAP. Chip	B	50WV	0.0047uF
1051	K22170813	CAP. Chip	B	50WV	0.0047uF
1052	K22170805	CAP. Chip	B	50WV	0.001uF
1053	K22170817	CAP. Chip	B	50WV	0.01uF
1054	K22170805	CAP. Chip	B	50WV	0.001uF
1055	K22170817	CAP. Chip	B	50WV	0.01uF
1056	K22170805	CAP. Chip	B	50WV	0.001uF
1057	K22170805	CAP. Chip	B	50WV	0.001uF

C1058	K22170210	CAP. Chip	CH	50WV	9pF
C1059	K22170215	CAP. Chip	CH	50WV	15pF
C1060	K22170210	CAP. Chip	CH	50WV	9pF
C1061	K22170202	CAP. Chip	CH	50WV	1pF
C1062	K22170210	CAP. Chip	CH	50WV	9pF
C1063	K22170210	CAP. Chip	CH	50WV	9pF
C1064	K22170817	CAP. Chip	B	50WV	0.01uF
C1065	K22170817	CAP. Chip	B	50WV	0.01uF
C1066	K40179007	AL. Electro. CAP.		50WV	3.3uF
C1067	K22170817	CAP. Chip	B	50WV	0.01uF
C1068	K40129004	AL. Electro. CAP.		16WV	10uF
C1070	K22170203	CAP. Chip	CH	50WV	2pF
C1071	K22170813	CAP. Chip	B	50WV	0.0047uF
C1072	K22170813	CAP. Chip	B	50WV	0.0047uF
C1073	K22141809	CAP. Chip	B	25WV	0.1uF
C1074	K22141809	CAP. Chip	B	25WV	0.1uF
C1075	K40129004	AL. Electro. CAP.		16WV	10uF
C1076	K22141809	CAP. Chip	B	25WV	0.1uF
C1077	K40129004	AL. Electro. CAP.		16WV	10uF
C1078	K40129004	AL. Electro. CAP.		16WV	10uF
C1079	K22141809	CAP. Chip	B	25WV	0.1uF
C1080	K40109024	AL. Electro. CAP.		10WV	100uF
C1081	K70167104	Tantalum CAP.		35WV	0.1uF
C1084	K22170306	CAP. Chip	UJ	50WV	5pF
C1085	K22170223	CAP. Chip	CH	50WV	33pF
C1086	K22170227	CAP. Chip	CH	50WV	47pF
C1087	K22170817	CAP. Chip	B	50WV	0.01uF
C1088	K22170210	CAP. Chip	CH	50WV	9pF
C1089	K22170817	CAP. Chip	B	50WV	0.01uF
C1090	K22170805	CAP. Chip	B	50WV	0.001uF
C1091	K22170817	CAP. Chip	B	50WV	0.01uF
C1092	K22170817	CAP. Chip	B	50WV	0.01uF
C1093	K22170206	CAP. Chip	CH	50WV	5pF
C1094	K22170210	CAP. Chip	CH	50WV	9pF
C1095	K22170817	CAP. Chip	B	50WV	0.01uF
C1096	K22170215	CAP. Chip	CH	50WV	15pF
C1097	K22170817	CAP. Chip	CH	50WV	0.01uF
C1098	K22170235	CAP. Chip	CH	50WV	100pF
C1099	K22170817	CAP. Chip	B	50WV	0.01uF
C1100	K22170235	CAP. Chip	CH	50WV	100pF
C1101	K22170805	CAP. Chip	B	50WV	0.001uF
C1102	K22170817	CAP. Chip	B	50WV	0.01uF
C1103	K22170235	CAP. Chip	CH	50WV	100pF
C1104	K22170235	CAP. Chip	CH	50WV	100pF
C1105	K22170805	CAP. Chip	B	50WV	0.001uF
C1106	K22170805	CAP. Chip	B	50WV	0.001uF
C1107	K22170805	CAP. Chip	B	50WV	0.001uF
C1111	K22170805	CAP. Chip	B	50WV	0.001uF
C1112	K22170805	CAP. Chip	B	50WV	0.001uF
C1113	K22170219	CAP. Chip	CH	50WV	22pF
C1114	K22170219	CAP. Chip	CH	50WV	22pF
C1115	K22170817	CAP. Chip	B	50WV	0.01uF
C1116	K22141809	CAP. Chip		25WV	0.1uF
C1117	K22170817	CAP. Chip	B	50WV	0.01uF
C1119	K22170805	CAP. Chip	B	50WV	0.001uF
C1120	K22170805	CAP. Chip	B	50WV	0.001uF
C1122	K22170805	CAP. Chip	B	50WV	0.001uF
C1123	K22170805	CAP. Chip	B	50WV	0.001uF
C1124	K22170817	CAP. Chip	B	50WV	0.01uF
C1125	K40179013	AL. Electro. CAP.		50WV	1uF
C1126	K40179013	AL. Electro. CAP.		50WV	1uF
C1127	K22170817	CAP. Chip	B	50WV	0.01uF
C1128	K40109024	AL. Electro. CAP.		10WV	100uF
C1129	K22141809	CAP. Chip	B	25WV	0.1uF
C1130	K70137225	Tantalum CAP.		20WV	2.2uF
C1131	K19149025	Ceramic CAP.		25WV	0.1uF
C1132	K22170805	CAP. Chip	B	50WV	0.001uF
C1133	K19149025	Ceramic CAP.		25WV	0.1uF
C1134	K22170235	CAP. Chip	CH	50WV	100pF
C1135	K22170805	CAP. Chip	B	50WV	0.001uF
C1136	K22170235	CAP. Chip	CH	50WV	100pF
C1137	K40109004	AL. Electro. CAP.		10WV	470uF
C1138	K22170805	CAP. Chip	B	50WV	0.001uF
C1139	K22170235	CAP. Chip	CH	50WV	100pF
C1140	K22170817	CAP. Chip	B	50WV	0.01uF
C1141	K22170204	CAP. Chip	CH	50WV	3pF
C1142	K22170204	CAP. Chip	CH	50WV	3pF

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C1143	K22170805	CAP. Chip	B	50WV	0.001uF
C1144	K22170205	CAP. Chip	CH	50WV	4pF
C1145	K22170213	CAP. Chip	CH	50WV	12pF
C1146	K22170817	CAP. Chip	B	50WV	0.01uF
C1147	K22170229	CAP. Chip	CH	50WV	56pF
C1148	K40129004	AL. Electro. CAP.		16WV	10uF
C1149	K22170817	CAP. Chip	B	50WV	0.01uF
C1150	K22170817	CAP. Chip	B	50WV	0.01uF
C1151	K22170817	CAP. Chip	B	50WV	0.01uF
C1152	K22141809	CAP. Chip	B	25WV	0.1uF
C1153	K22170817	CAP. Chip	B	50WV	0.01uF
C1154	K22170805	CAP. Chip	B	50WV	0.001uF
C1156	K22170205	CAP. Chip	CH	50WV	4pF
C1157	K22170223	CAP. Chip	CH	50WV	33pF
C1158	K22170219	CAP. Chip	CH	50WV	22pF
C1159	K22170325	CAP. Chip	UJ	50WV	39pF
C1160	K40109015	AL. Electro. CAP.		10WV	100uF
C1161	K22170817	CAP. Chip	B	50WV	0.01uF
C1162	K22170201	CAP. Chip	CH	50WV	0.5pF
C1163	K22170817	CAP. Chip	B	50WV	0.01uF
C1164	K22170817	CAP. Chip	B	50WV	0.01uF
C1165	K22170202	CAP. Chip	CH	50WV	1pF
C1166	K22170817	CAP. Chip	B	50WV	0.01uF
C1167	K22170235	CAP. Chip	CH	50WV	100pF
C1168	K40109002	AL. Electro. CAP.		10WV	47uF
C1169	K22170805	CAP. Chip	B	50WV	0.001uF
C1170	K22170805	CAP. Chip	B	50WV	0.001uF
C1171	K40109002	AL. Electro. CAP.		10WV	47uF
C1172	K22170203	CAP. Chip	CH	50WV	2pF
C1173	K22170817	CAP. Chip	B	50WV	0.01uF
C1174	K40109004	AL. Electro. CAP.		10WV	470uF
C1175	K22170805	CAP. Chip	B	50WV	0.001uF
C1176	K22170150	CAP. Chip	CH	50WV	15pF
C1177	K22170205	CAP. Chip	CH	50WV	4pF
C1178	K22170805	CAP. Chip	B	50WV	0.001uF
C1179	K22170805	CAP. Chip	B	50WV	0.001uF
C1180	K22170205	CAP. Chip	CH	50WV	1pF
TC1001	K91000158	Variable CAP.	6pF		
T1001	L0020907	Coil			
T1002	L0020907	Coil			
T1003	L0020907	Coil			
T1004	L0020907	Coil			
T1005	L0020907	Coil			
T1006	L0020907	Coil			
L1001	L1190189	M.RFC	1mH		
L1002	L1190148	M.RFC	10uH		
L1003	L1190149	M.RFC	1uH		
L1004	L1190149	M.RFC	1uH		
L1005	L1190149	M.RFC	1uH		
L1006	L1190189	M.RFC	1mH		
L1007	L1190218	M.RFC	100uH		
L1008	L0190138	Coil			
L1009	L1190218	M.RFC	100uH		
L1010	L1190218	M.RFC	100uH		
L1011	L1190218	M.RFC	100uH		
L1012	L1190123	M.RFC	3.9mH		
L1013	L0021205	Coil	0.7uH		
L1014	L1190192	M.RFC	0.47uH		
L1015	L0020678	Coil			
L1016	L1190218	M.RFC	100uH		
L1017	L0021457	Coil			
L1019	L1190218	M.RFC	100uH		
L1020	L1190149	M.RFC	1uH		
L1021	L1190218	M.RFC	100uH		
L1022	L1190218	M.RFC	100uH		
L1023	L0190211	Coil			
L1024	L1190200	M.RFC	2.7uH		
L1025	L1190149	M.RFC	1uH		
L1026	L0021520	Coil			
CV1001	L4020091	Helical Resonator			
CV1002	L4020092	Helical Resonator			
J1001	P0090528	Connector			
PJ1001	P1090210	Connector			
PJ1002	P1090210	Connector			
JP1001	T9205550	Wire ASSY			

TP1001	Q5000036	TP-G	MK-1095
	L9190001	Ferrite Beads	
	R0511090	Shield Case	
	R0062770B	VCO Case A	
	R0062780A	VCO Case Lid	
	R0122640	Shield Plate	
	R0115290	Shield Case	
	R0115300	Shield Lid	
	R0125180	Shield Plate	
	R0125280	Shield Plate	
	L9190016	Shield Case	

1200MHz RF UNIT

Symbol No.	Part No.	Description	Device
	F2952000A	Printed Circuit Board	
	C029520AA	PCB with Components.	
Q2001	G4801647O	FET	3SK164O T7
Q2002	G3333567	Transistor	2SC3356 T2B
Q2003	G4801657O	FET	3SK165O T7
Q2004	G4801220L	FET	3SK122L
Q2005	G1090606	IC	LA6358
Q2006	G3115280	Transistor	2SA1528
Q2007	G3070001	Transistor	FA1A4M T2B
Q2008	G3108127F	Transistor	2SA812 T2BM6B
Q2009	G3108127F	Transistor	2SA812 T2BM6B
Q2010	G3108127F	Transistor	2SA812 T2BM6B
Q2011	G3070001	Transistor	FA1A4M T2B
Q2012	G3333567	Transistor	2SC3356
Q2013	G3326207B	Transistor	2SC2620QBTR
Q2014	G4801220L	FET	3SK122L
Q2015	G3803027G	FET	2SK302GR TE85R
Q2016	G3803027G	FET	2SK302GR TE85R
Q2017	G3803027G	FET	2SK302GR TE85R
Q2018	G4801220L	FET	3SK122L
Q2019	Q7000077	Double-Balanced -MIX	DM-600A24
Q2020	G1090822	IC	uPC1659G
Q2021	G1090778	IC	L7809
Q2022	G1090823	IC	M67715
Q2023	G3211340R	Transistor	2SB1134R
Q2024	G3207720P	Transistor	2SB772P
Q2025	G3416670R	Transistor	2SD1667R
Q2026	G3316237F	Transistor	2SC1623 T2B-L6
Q2027	G3070014	Transistor	FA1L4L T2B
D2001	G2090344	Diode	1SV178
D2002	G2090408	Diode	1SS270
D2003	G2090408	Diode	1SS270
D2004	G2090408	Diode	1SS270
D2005	G2070001	Diode	1SS188 TE85R
D2006	G2090408	Diode	1SS270
D2007	G2090408	Diode	1SS270
D2008	G2090027	Diode	1SS53
D2009	G2090297	Diode	1SS110
D2010	G2090408	Diode	1SS270
D2011	G2090027	Diode	1SS53
D2012	G2090027	Diode	1SS53
D2013	G2090027	Diode	1SS53
D2014	G2090027	Diode	1SS53
D2015	G2090344	Diode	1SV178
D2016	G2090408	Diode	1SS270
D2017	G2090027	Diode	1SS53
D2018	G2090027	Diode	1SS53
D2019	G2090306	Diode	10E1
D2020	G2090306	Diode	10E1
D2021	G2090408	Diode	1SS270
D2022	G2090408	Diode	1SS270
TH2001	G9090020	Thirmistor	
TH2002	G9090020	Thirmistor	
TH2003	G9090020	Thirmistor	
XF2001	H1102119	XTAL Filter	13M15A
R2001	J24205682	RES. Chip	1/10W 6.8k ohm
R2002	J24205473	RES. Chip	1/10W 47k ohm
R2003	J24205223	RES. Chip	1/10W 22k ohm
R2004	J24205680	RES. Chip	1/10W 68 ohm
R2005	J01225331	Carbon Film RES.	1/6W 330 ohm
R2006	J24205470	RES. Chip	1/10W 47 ohm
R2007	J24205331	RES. Chip	1/10W 330 ohm

(FEX-736-1.2) PARTS LIST

2008	J01225272	Carbon Film RES.	1/6W	2.7k ohm	PJ
2009	J24205150	RES. Chip	1/10W	15 ohm	
2010	J24205101	RES. Chip	1/10W	100 ohm	
2011	J24205473	RES. Chip	1/10W	47k ohm	
2012	J01225103	Carbon Film RES.	1/6W	10k ohm	PJ
2013	J24205470	RES. Chip	1/10W	47 ohm	
2014	J01225471	Carbon Film RES.	1/6W	470 ohm	PJ
2015	J24205101	RES. Chip	1/10W	100 ohm	
2016	J24205680	RES. Chip	1/10W	68 ohm	
2017	J24205101	RES. Chip	1/10W	100 ohm	
2018	J24205331	RES. Chip	1/10W	330 ohm	
2019	J24205471	RES. Chip	1/10W	470 ohm	
2020	J24205473	RES. Chip	1/10W	47k ohm	
2021	J24205225	RES. Chip	1/10W	2.2M ohm	
2022	J24205470	RES. Chip	1/10W	47 ohm	
2023	J24205102	RES. Chip	1/10W	1k ohm	
2024	J24205560	RES. Chip	1/10W	56 ohm	
2025	J24205222	RES. Chip	1/10W	2.2k ohm	
2026	J24205222	RES. Chip	1/10W	2.2k ohm	
2027	J24205102	RES. Chip	1/10W	1k ohm	
2028	J24205103	RES. Chip	1/10W	10k ohm	
2029	J24205102	RES. Chip	1/10W	1k ohm	
2031	J24205222	RES. Chip	1/10W	2.2k ohm	
2032	J24205331	RES. Chip	1/10W	330 ohm	
2033	J24205180	RES. Chip	1/10W	18 ohm	
2034	J24205331	RES. Chip	1/10W	330 ohm	
2035	J24205180	RES. Chip	1/10W	18 ohm	
2036	J24205331	RES. Chip	1/10W	330 ohm	
2037	J24205220	RES. Chip	1/10W	22 ohm	
2038	J20206330	Metalic Film RES.	1W	33 ohm	
2039	J24205103	RES. Chip	1/10W	10k ohm	
2040	J24205101	RES. Chip	1/10W	100 ohm	
2041	J24205103	RES. Chip	1/10W	10k ohm	
2042	J24205473	RES. Chip	1/10W	47k ohm	
2043	J24205473	RES. Chip	1/10W	47k ohm	
2044	J24205473	RES. Chip	1/10W	47k ohm	
2045	J24205104	RES. Chip	1/10W	100k ohm	
2046	J24205103	RES. Chip	1/10W	10k ohm	
2047	J24205223	RES. Chip	1/10W	22k ohm	
2048	J24205473	RES. Chip	1/10W	47k ohm	
R2049	J24205474	RES. Chip	1/10W	470k ohm	
2050	J24205221	RES. Chip	1/10W	220 ohm	
R2051	J24205681	RES. Chip	1/10W	680 ohm	
2052	J24205102	RES. Chip	1/10W	1k ohm	
2053	J24205101	RES. Chip	1/10W	100 ohm	
2054	J24205222	RES. Chip	1/10W	2.2k ohm	
R2055	J02225471	Carbon Film RES.	1/6W	470 ohm	UJ
2056	J24205560	RES. Chip	1/10W	56 ohm	
R2057	J24205473	RES. Chip	1/10W	47k ohm	
2058	J24205470	RES. Chip	1/10W	. 47 ohm	
R2059	J24205332	RES. Chip	1/10W	3.3k ohm	
R2060	J24205103	RES. Chip	1/10W	10k ohm	
R2061	J24205103	RES. Chip	1/10W	10k ohm	
R2062	J24205100	RES. Chip	1/10W	10 ohm	
R2063	J24205390	RES. Chip	1/10W	39 ohm	
R2064	J24205331	RES. Chip	1/10W	330 ohm	
R2065	J02225560	Carbon Film RES.	1/6W	56 ohm	UJ
R2066	J24205101	RES. Chip	1/10W	100 ohm	
R2067	J24205471	RES. Chip	1/10W	470 ohm	
R2068	J24205221	RES. Chip	1/10W	220 ohm	
R2069	J24205479	RES. Chip	1/10W	4.7 ohm	
R2070	J24205474	RES. Chip	1/10W	470k ohm	
R2071	J24205474	RES. Chip	1/10W	470k ohm	
R2072	J24205473	RES. Chip	1/10W	47k ohm	
R2074	J24205102	RES. Chip	1/10W	1k ohm	
R2075	J01225101	Carbon Film RES.	1/6W	100 ohm	PJ
R2076	J24205101	RES. Chip	1/10W	100 ohm	
R2077	J24205680	RES. Chip	1/10W	68 ohm	
R2078	J24205330	RES. Chip	1/10W	33 ohm	
R2079	J24205181	RES. Chip	1/10W	180 ohm	
R2080	J24205681	RES. Chip	1/10W	680 ohm	
R2081	J24205689	RES. Chip	1/10W	6.8 ohm	
R2082	J24205681	RES. Chip	1/10W	680 ohm	
R2083	J24205331	RES. Chip	1/10W	330 ohm	
R2084	J24205272	RES. Chip	1/10W	2.7k ohm	
R2085	J24205101	RES. Chip	1/10W	100 ohm	
R2086	J24205222	RES. Chip	1/10W	2.2k ohm	
R2087	J24205471	RES. Chip	1/10W	470 ohm	
R2088	J24205103	RES. Chip	1/10W	10k ohm	
R2089	J24205151	RES. Chip	1/10W	150 ohm	
R2090	J20306221	Metalic Film RES.	1W	220 ohm	
R2091	J24205103	RES. Chip	1/10W	10k ohm	
R2092	J24205102	RES. Chip	1/10W	1k ohm	
R2093	J24205689	RES. Chip	1/10W	6.8 ohm	
R2094	J24205102	RES. Chip	1/10W	1k ohm	

R2095	J24205223	RES. Chip	1/10W	22k ohm	
R2100	J01225104	Carbon Film RES.	1/6W	100k ohm	PJ
R2101	J01225470	Carbon Film RES.	1/6W	47 ohm	
R2102	J24205223	RES. Chip	1/10W	22k ohm	
R2103	J24205470	RES. Chip	1/10W	47 ohm	
VR2001	J51747104	POT.	B	100k ohm	
VR2002	J51745473	POT.	B	47k ohm	
VR2003	J51745224	POT.	B	220k ohm	
VR2004	J51745471	POT.	B	470 ohm	
VR2005	J51745101	POT.	B	100 ohm	
VR2006	J51745222	POT.	B	2.2k ohm	
C2001	K22170215	CAP. Chip	CH	50WV	15pF
C2002	K22170209	CAP. Chip	CH	50WV	8pF
C2003	K22170206	CAP. Chip	CH	50WV	5pF
C2004	K22170235	CAP. Chip	CH	50WV	100pF
C2005	K22170235	CAP. Chip	CH	50WV	100pF
C2006	K22170211	CAP. Chip	CH	50WV	10pF
C2007	K22170805	CAP. Chip	B	50WV	0.001uF
C2008	K22170211	CAP. Chip	CH	50WV	10pF
C2009	K22170805	CAP. Chip	B	50WV	0.001uF
C2010	K22170204	CAP. Chip	CH	50WV	3pF
C2011	K22170235	CAP. Chip	CH	50WV	100pF
C2012	K22170235	CAP. Chip	CH	50WV	100pF
C2013	K22170235	CAP. Chip	CH	50WV	100pF
C2014	K22170211	CAP. Chip	CH	50WV	10pF
C2015	K22170805	CAP. Chip	B	50WV	0.001uF
C2016	K22170203	CAP. Chip	CH	50WV	2pF
C2017	K22170209	CAP. Chip	CH	50WV	8pF
C2018	K22170201	CAP. Chip	CH	50WV	0.5pF
C2019	K22170235	CAP. Chip	CH	50WV	100pF
C2020	K22170805	CAP. Chip	B	50WV	0.001uF
C2021	K22170805	CAP. Chip	B	50WV	0.001uF
C2022	K22170201	CAP. Chip	CH	50WV	0.5pF
C2023	K22170235	CAP. Chip	CH	50WV	100pF
C2024	K22170817	CAP. Chip	B	50WV	0.01uF
C2025	K22170211	CAP. Chip	CH	50WV	10pF
C2026	K22170817	CAP. Chip	B	50WV	0.01uF
C2027	K22170219	CAP. Chip	CH	50WV	22pF
C2028	K22170210	CAP. Chip	CH	50WV	9pF
C2029	K22170817	CAP. Chip	B	50WV	0.01uF
C2030	K22170817	CAP. Chip	B	50WV	0.01uF
C2031	K22170805	CAP. Chip	B	50WV	0.001uF
C2032	K22170817	CAP. Chip	B	50WV	0.01uF
C2033	K22170817	CAP. Chip	B	50WV	0.01uF
C2034	K22170209	CAP. Chip	CH	50WV	8pF
C2035	K22170817	CAP. Chip	B	50WV	0.01uF
C2036	K22170817	CAP. Chip	B	50WV	0.01uF
C2037	K22170817	CAP. Chip	B	50WV	0.01uF
C2038	K22170213	CAP. Chip	CH	50WV	12pF
C2039	K22170211	CAP. Chip	CH	50WV	10pF
C2040	K22170202	CAP. Chip	CH	50WV	1pF
C2041	K22170211	CAP. Chip	CH	50WV	10pF
C2042	K22170218	CAP. Chip	CH	50WV	22pF
C2043	K22170817	CAP. Chip	CH	50WV	9pF
C2044	K22170817	CAP. Chip	B	50WV	0.01uF
C2045	K22170817	CAP. Chip	B	50WV	0.01uF
C2046	K22170817	CAP. Chip	B	50WV	0.01uF
C2047	K22170817	CAP. Chip	B	50WV	0.01uF
C2048	K22170817	CAP. Chip	B	50WV	0.01uF
C2049	K40129004	AL. Electro. CAP.		16WV	10uF
C2050	K22170817	CAP. Chip	B	50WV	0.01uF
C2051	K22170817	CAP. Chip	B	50WV	0.01uF
C2052	K22170805	CAP. Chip	B	50WV	0.001uF
C2053	K22170805	CAP. Chip	B	50WV	0.001uF
C2054	K22170805	CAP. Chip	B	50WV	0.001uF
C2055	K22170805	CAP. Chip	B	50WV	0.001uF
C2056	K22170805	CAP. Chip	B	50WV	0.001uF
C2057	K22170227	CAP. Chip	CH	50WV	47pF
C2058	K22170227	CAP. Chip	CH	50WV	47pF
C2059	K22170805	CAP. Chip	B	50WV	0.001uF
C2060	K22170817	CAP. Chip	B	50WV	0.01uF
C2061	K22170817	CAP. Chip	B	50WV	0.01uF
C2062	K22170208	CAP. Chip	CH	50WV	7pF
C2063	K22170817	CAP. Chip	B	50WV	0.01uF
C2064	K22170817	CAP. Chip	B	50WV	0.01uF
C2065	K22170213	CAP. Chip	CH	50WV	12pF
C2066	K22170805	CAP. Chip	B	50WV	0.001uF
C2067	K22170207	CAP. Chip	CH	50WV	6pF
C2068	K22170817	CAP. Chip	B	50WV	0.01uF
C2069	K22170817	CAP. Chip	B	50WV	0.01uF
C2070	K22170817	CAP. Chip	B	50WV	0.01uF
C2071	K22170817	CAP. Chip	B	50WV	0.01uF
C2072	K22170817	CAP. Chip	B	50WV	0.01uF
C2073	K22170817	CAP. Chip	B	50WV	0.01uF

PARTS LIST (FEX-736-1.2)

C2074	K22170817	CAP. Chip	B	50WV	0.01uF
C2075	K22170817	CAP. Chip	B	50WV	0.01uF
C2076	K22170211	CAP. Chip	CH	50WV	10pF
C2077	K22170817	CAP. Chip	B	50WV	0.01uF
C2078	K22170219	CAP. Chip	CH	50WV	22pF
C2079	K22170817	CAP. Chip	B	50WV	0.01uF
C2080	K22170219	CAP. Chip	CH	50WV	22pF
C2081	K22170805	CAP. Chip	B	50WV	0.001uF
C2082	K22170215	CAP. Chip	CH	50WV	15pF
C2083	K22170211	CAP. Chip	CH	50WV	10pF
C2084	K22170206	CAP. Chip	CH	50WV	5pF
C2085	K22170207	CAP. Chip	CH	50WV	6pF
C2086	K22170805	CAP. Chip	B	50WV	0.001uF
C2087	K22170817	CAP. Chip	B	50WV	0.01uF
C2088	K22170817	CAP. Chip	B	50WV	0.01uF
C2089	K22170817	CAP. Chip	B	50WV	0.01uF
C2090	K22170211	CAP. Chip	CH	50WV	10pF
C2091	K22170817	CAP. Chip	B	50WV	0.01uF
C2092	K22170817	CAP. Chip	B	50WV	0.01uF
C2093	K22170805	CAP. Chip	B	50WV	0.001uF
C2094	K22170805	CAP. Chip	B	50WV	0.001uF
C2095	K22170805	CAP. Chip	B	50WV	0.001uF
C2096	K22170221	CAP. Chip	CH	50WV	27pF
C2097	K22170805	CAP. Chip	B	50WV	0.001uF
C2098	K22170805	CAP. Chip	B	50WV	0.001uF
C2099	K22170805	CAP. Chip	B	50WV	0.001uF
C2100	K22170805	CAP. Chip	B	50WV	0.001uF
C2101	K22170204	CAP. Chip	CH	50WV	3pF
C2102	K22170204	CAP. Chip	CH	50WV	3pF
C2103	K22170215	CAP. Chip	CH	50WV	15pF
C2105	K22170805	CAP. Chip	B	50WV	0.001uF
C2106	K22170207	CAP. Chip	CH	50WV	6pF
C2107	K22170207	CAP. Chip	CH	50WV	6pF
C2108	K22170215	CAP. Chip	CH	50WV	15pF
C2110	K40129004	AL. Electro. CAP.		16WV	10uF
C2111	K40129004	AL. Electro. CAP.		10WV	100uF
C2112	K22170805	CAP. Chip	B	50WV	0.001uF
C2113	K40129004	AL. Electro. CAP.		16WV	10uF
C2114	K22170805	CAP. Chip	B	50WV	0.001uF
C2115	K22141809	CAP. Chip	B	25WV	0.1uF
C2116	K22170805	CAP. Chip	B	50WV	0.001uF
C2117	K40129004	AL. Electro. CAP.		16WV	10uF
C2118	K22170805	CAP. Chip	B	50WV	0.001uF
C2119	K22141809	CAP. Chip	B	25WV	0.1uF
C2120	K40129004	AL. Electro. CAP.		16WV	10uF
C2121	K22141809	CAP. Chip	B	25WV	0.1uF
C2122	K22170805	CAP. Chip	B	50WV	0.001uF
C2123	K40109024	AL. Electro. CAP.		10WV	100uF
C2124	K22170805	CAP. Chip	B	50WV	0.001uF
C2125	K22170221	CAP. Chip	CH	50WV	27pF
C2126	K22170805	CAP. Chip	B	50WV	0.001uF
C2127	K22141809	CAP. Chip	B	25WV	0.1uF
C2128	K22170202	CAP. Chip	CH	50WV	1pF
C2129	K02172059	Ceramic CAP.	CK	50WV	0.5pF
C2130	K22170201	CAP. Chip	CH	50WV	0.5pF
C2131	K22170201	CAP. Chip	CH	50WV	0.5pF
C2132	K22170211	CAP. Chip	CH	50WV	10pF
TC2001	K91000104	Variable CAP.	3pF		
T2001	L0020907	Coil			
T2002	L0020907	Coil			
T2003	L0020907	Coil			
T2004	L0020907	Coil			
T2005	L0020907	Coil			
T2006	L0020907	Coil			
T2007	L0020907	Coil			
T2008	L0021736	Coil			
T2009	L0021736	Coil			
T2010	L0020907	Coil			
T2011	L0021736	Coil			
T2012	L0190007	Coil			
T2013	L0020907	Coil			
T2014	L0020907	Coil			
T2015	L0020907	Coil			
T2016	L0020907	Coil			
L2001	L1190149	M.RFC	1uH		
L2002	L1190148	M.RFC	10uH		
L2003	L1020693A	RFC			
L2004	L1190149	M.RFC	1uH		

L2005	L1190148	M.RFC	10uH		
L2006	L1190149	M.RFC	1uH		
L2008	L0020679	Coil			
L2009	L1190149	M.RFC	1uH		
CV2001	L4020094	Helical Resonator			
CV2002	L4020093	Helical Resonator			
CV2003	L4020094	Helical Resonator			
CV2004	L4020094	Helical Resonator			
J2001	P1090348	Connector			
J2002	P1090296	Connector			
J2003	P0090527	Connector			
PJ2001	P1090255	Connector			
PJ2002	P1090255	Connector			
PJ2003	P1090210	Connector			
PJ2004	P1090210	Connector			
JP2001	T9205551	Wire ASSY			
JP2002	T9205592A	Wire ASSY			
	T9317810	Wire ASSY			
	T9311203	Wire ASSY			
	L9190001	Ferrite Beads			
	R0124510	Shield Plate			
	R0124520	Heatsink Plate			
	R0124530	Heatsink Plate			
	R0109760	Nut Spacer			
	R6112070	Spacer			
	R6018771	Booster Screw			
	R6119130A	Spacer			
	R0125560	Holder			
	R0122640	Shield Plate			

1200MHz PA UNIT

Symbol No.	Part No.	Description	Device		
	F2953101A	Printed Circuit Board			
	C029531AA	PCB with Components			
Q3001	G1090712	IC	M57762		
D3001	G2090132	Diode	1SS55		
D3002	G2090118	Diode	1SS97		
D3003	G2090027	Diode	1SS53		
R3001	J01225103	Carbon Film RES.	1/6W	10k ohm	P
R3002	J24205472	RES. Chip	1/10W	47k ohm	
R3003	J31309002	RES.	1W	0.1 ohm	
R3004	J31309002	RES.	1W	0.1 ohm	
C3001	K22170202	CAP. Chip	CH	50WV	1p
C3002	K22170202	CAP. Chip	CH	50WV	1p
C3003	K22170805	CAP. Chip	B	50WV	0.001u
C3004	K22170805	CAP. Chip	B	50WV	0.001u
C3005	K22170202	CAP. Chip	CH	50WV	1p
C3007	K22170805	CAP. Chip	B	50WV	0.001u
C3008	K22170202	CAP. Chip	CH	50WV	1p
C3009	K22170211	CAP. Chip	CH	50WV	10p
C3010	K40129004	AL. Electro. CAP.		16WV	10u
C3011	K22170805	CAP. Chip	B	50WV	0.001u
C3012	K22170805	CAP. Chip	B	50WV	0.001u
C3013	K22170211	CAP. Chip	CH	50WV	10p
C3014	K40129004	AL. Electro. CAP.		16WV	10u
C3015	K22170805	CAP. Chip	B	50WV	0.001u
C3016	K22170211	CAP. Chip	CH	50WV	10p
C3017	K22170805	CAP. Chip	B	50WV	0.001u
C3018	K40129004	AL. Electro. CAP.		16WV	10u
C3019	K22170805	CAP. Chip	B	50WV	0.001u
C3020	K22170201	CAP. Chip	CH	50WV	0.5p
C3021	K22170202	CAP. Chip	CH	50WV	1p
C3022	K21170002	Feed Through CAP.		50WV	0.001u
C3023	K21170002	Feed Through CAP.		50WV	0.001u
C3024	K21170002	Feed Through CAP.		50WV	0.001u
C3025	K21170002	Feed Through CAP.		50WV	0.001u

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C3026	K21170002	Feed Through CAP.		50WV	0.001uF
C3027	K22170201	CAP. Chip	CH	50WV	0.5pF
C3028	K22170201	CAP. Chip	CH	50WV	0.5pF
C3029	K02172059	Ceramic CAP.	CK	50WV	0.5pF
L3001	L0020678	Coil			
P3001	P1090209	Connector			
P3001	T9205537	Wire ASSY			
RL3001	M1190042	Relay	G4Y-15ZP		
	L9190001	Ferrite Beads			
	Q5000036	TP-G	MK-1095		
	T9317823	Wire ASSY			
	T9317800A	Wire ASSY			
	T9317822	Wire ASSY			
	R4083840B	Booster Heatsink			
	R0511080A	Shield Cover PA			
	R0124500	Shield Plate PA			
	R7043900	Insulator Board B			

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